Project Management

About this Topic: Project Management

Topic Mentor

Mary Grace Duffy

Mary Grace Duffy, Ed.D, a partner at the Cambridge Hill Partners, has more than 30 years' experience "multitasking" as both a line manager and a consultant. She has condensed this expertise into practical techniques for managing tasks and people, managing organizational change, planning and decision making, and the other key skills for successful project management. Her work focuses on expanding managers' existing general management skills to improve their project management abilities.

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What Would You Do?

What would you do?

Brett was in charge of launching the company's public relations program. After three months of creative energy and high enthusiasm, the mood of the group began to change. Team members were overworked and deadlines were slipping. Even the quality of the team's work seemed to be decreasing. Amidst all these concerns, Brett received a memo from his boss asking for a progress update. What would Brett say? How could he get the project back on track before his boss pulled the plug on it?

What would you do?

Even though the project is underway, Brett might start by revisiting the objectives, schedule, and set of deliverables that were decided upon during the early planning phase. By reviewing these documents and retracing how the work then unfolded, he might uncover the roots of the problems. Next, Brett needs to evaluate his options for getting his project back on track. Perhaps he can renegotiate some of the deadlines or narrow the project scope. Maybe he can hire temporary help or delegate some of his work to another group. Each step of the way, he should communicate with his team and keep his boss apprised of what's happening.

In this topic, you'll learn how to define the scope and mission of your projects; plan schedules, budgets, and tasks; and create back-up plans, so your project can keep on track even when you encounter obstacles.

Why is it that some projects go right and some go terribly wrong? Even the best team could see its efforts fail if it operates without effective planning and management.

Topic Objectives

This topic helps you:

- Scope out a project and define project objectives
- Develop realistic schedules and set deadlines
- Create an accurate and usable budget
- Monitor budgets and keep projects on track
- Communicate progress and problems to stakeholders
- Assess risk and develop contingency plans

What is project management?

A project is a set of interrelated activities, usually involving a group of people working together toward a common goal or objective over a period of time.

> Designing a new product, for example, is a project. Individuals from different business units in a company may collaborate on design, building, testing, and modification. Once the new product goes into production, the project ends for the design group. The responsibility for producing, marketing, selling, and servicing the product is handed over to established departments or business units.

Projects are undertaken at all levels in a company. They may require the efforts of a single person or many thousands. Their duration may range from a week to more than two years. Some involve a single unit of one organization. Others (such as joint ventures and partnering) cross functional or even organizational boundaries.

If you're managing a project and you want to ensure its success, you need to transform what may begin as a vague concept into a measurable and accountable process that meets your company's requirements. Project management, then, is the planning, scheduling, and orchestrating of project

activities to achieve objectives within a specified period of time. Not surprisingly, project management requires strong organizational, budgeting, staffing, controlling, and communication skills.

Why is it important?

> A project is a problem scheduled to be solved.
> –Dr. J.M. Juran

By managing projects effectively, you generate immense benefits for your company. Here are just a few examples:

- **You ensure that things get done on time and on budget.** These achievements add predictability to your organization's work.
- **You minimize costs.** By finding ways to deliver on objectives within reasonable planning horizons, good project managers reduce costs.
- **You utilize resources effectively.** Sound project management makes more efficient use of money and valuable employees' time.
- **You add value to the business.** Projects are a key means by which organizations reach their strategic goals.

What is the process?

To manage a project, you typically progress through four phases:

1. **Defining and organizing the project:** You identify the business need for and objectives of the project; clarify competing demands and watch for scope creep; define roles and responsibilities; create a project charter; and develop high-level time and cost estimates.
2. **Planning the project:** You assemble your team and assign tasks; develop a budget; develop a schedule; and create a communications plan.
3. **Executing the project:** You launch the project with your team; monitor and control progress in terms of cost, time, and quality; and manage risk.
4. **Closing down the project:** You and the project team evaluate the team's performance; archive documents related to the project; capture lessons learned; and celebrate the project's completion.

Overlapping tasks and activities

Even though the four phases of project management have distinct activities associated with them and the process appears linear, the major tasks of the phases often overlap and are iterative.

> For example, you might begin the first phase of defining and organizing the project with an approximate figure for your budget and an estimated completion date for the project. Once you're in the second phase, planning the project and filling in the details of the project plan, you'll probably want your budget and schedule estimates to be much more specific. So you'll revisit some of the steps you took during the defining and organizing phase, asking questions in greater detail. Similar overlaps occur in later phases of the project life cycle.

Returning to the activities and tasks of an earlier phase in this way does not mean that you're moving backward or losing ground. Rather, it simply means that you are incorporating new knowledge and

information into the overall plan to improve the performance of your project tasks.

Uncover the root of the problem

> The secret to getting ahead is getting started.
> –Mark Twain

Suppose you've been assigned a project with explicit responsibilities and expectations. In this case, it's still a good idea to make sure that you've correctly identified the underlying need that the project is supposed to meet so that project solves the right problem.

> For example, imagine you're an IT manager and several people in your department have asked for a new database and data-entry system. You informally ask them: "Why do we need the new system?" The answers you receive include: "We can't get the data out fast enough" and "I have to sift through four different reports to compile an update on my clients' recent activity."

These responses describe symptoms, not underlying problems or needs. You need to ask more probing questions, such as "What type of data do you need?" "How are you using the data now?" and "How quickly do you need to retrieve the data?" Unless you know the answers to these and similarly detailed questions, you risk wasting time and money by designing a system that doesn't address your group's fundamental concerns.

Here are some questions that can help you uncover the real issues at the core of your project:

- What is the perceived need or purpose behind what we are trying to do?
- What caused people to see this as a problem that needed solving?
- Who has a stake in the solution or outcome?
- How do the various stakeholders' goals for the project differ?
- What criteria are people going to use to judge this project a success?

Brainstorm alternatives

After you have pinpointed the business need for the project under consideration, develop options for how you want to address that need. Brainstorm alternatives with your project team. Ask open-ended questions that encourage exploration of new ideas; for example:

- How many different ways can we solve this problem?
- Of the available alternatives, which will best solve the problem? Why?
- Is this alternative more or less costly than other suitable choices?
- Will this alternative result in a complete or only partial fix of the problem?

Based on your responses to these and other questions, select the best alternative.

Key Idea: Define project objectives

Key Idea

The next step is to define your project's objectives. The success of your project will be defined by how well you meet your objectives. Thus, the more explicitly you state your objectives at the outset, the less disagreement there will be at the end about whether you have met them.

When defining an objective, think SMART. In other words, an objective should be:

- **S**pecific, for example, who, when, or how many?
- **M**easurable, for example, a success rate, or percentage completed
- **A**ction-oriented, for instance, make a recommendation, or, conduct a survey
- **R**ealistic, for example, does it meet your budget parameters?
- **T**ime-limited, for instance, by a specific day or month

For example, consider a task force within an HR department that has been charged with developing a new health care benefits plan. Its SMART objective might be:

"To survey... (action-oriented)

...at least six providers that meet the department's minimum threshold criteria for service quality" (measurable).

"To recommend... (action-oriented)

...at the June board of directors' meeting... (time-oriented)

...the three providers... (specific)

...that offer the best and broadest coverage at a cost that is at least 10% less... (realistic)

...than the company's current per-employee contribution."

Choosing SMART objectives will keep your team on track and help you assess progress. After all, if you don't know what you're trying to do, how do you know if you've done it?

Align objectives

In addition to making your objectives SMART, also be sure they are aligned with the company's objectives. Doing so ensures that everyone on the project team understands how the project at hand fits in with the larger company goals. It also gets everyone moving in the same direction—the right direction.

Note that in the first project phase, defining and organizing, much is still in flux. Be prepared to revise your objectives as you gather more information about what your project is to achieve.

Balance competing demands

Every project has three competing demands:

- **Quality:** Satisfaction of the project's requirements.
- **Time:** The amount of time needed to produce the project's deliverables.

- **Cost:** The number/amount of money, people, and other resources needed to complete the project.

You can think of these three competing demands as variables in an equation:

Quality = Time + Cost

Change any one of these variables, and you change the other two as well.

> For example, suppose you decide to complete a database project in half the time than you originally estimated. In this case, one of two things would happen: Your costs would go up, or the quality of the final product would go down. That's because you will need to employ more people to get the job done faster, or you'll have to accept a system that has more bugs than originally planned because you didn't have enough time or personnel to double-check its functionality.

Deciding whether and how to make tradeoffs among quality, time, and cost is a major aspect of project management. It is crucial that you keep all stakeholders informed of any changes in your project's objectives—and that you explain the consequences of those changes in terms of quality, time, and cost. If you neglect to do this, your stakeholders may end up surprised—and dissatisfied—by the final outcome of the project.

Activity: Juggling demands

Try your hand at balancing time, cost, and quality.

Your team is designing a mid-priced TV for a large electronics company. The deadline is inflexible, as the TV is slated to be unveiled at a major consumer electronics trade show. The budget for the project is also inflexible for contractual reasons.

Of the following pairs of strategies, pick the one that is most likely in each pair to help achieve the highest quality for the least negative impact to your budget and schedule.

- ○ Get project out the door faster by encouraging the team to work paid overtime.

  Not the best choice. Encouraging the team to work overtime is not the best strategy. If they work too many hours, their attention to details may suffer.

- ○ Hire specialists to work on the product on a temporary basis

  Correct choice. For this particular project, hiring specialists on a temporary basis is a better solution than encouraging the team to work overtime. The specialists can apply their wealth of experience to increase the quality of the product.

Of the following pair of strategies, pick the one that is most likely in each pair to help achieve the highest quality for the least negative impact to your budget and schedule.

- ○ Make cuts to the product's proposed feature set

  Not the best choice. In this scenario, cutting the feature set is an unacceptable choice because the product will not meet quality requirements.

- Save money by using generic rather than high-end circuitry in the set's design

  Correct choice. In a perfect world, your team would not have to scrimp on the quality of parts. However, in this scenario, using generic parts actually has a minimal negative effect on quality and is the only practical way to release funds for the extra labor that is needed to get the product out on time with the agreed-upon feature set.

Of the following pairs of strategies, pick the one that is most likely in each pair to help achieve the highest quality for the least negative impact to your budget and schedule.

- Reduce the number of employees on the project

  Not the best choice. Since this project is already behind schedule, cutting manpower to save money is not a good strategy.

- Add an unplanned innovative feature to the product

  Correct choice. Exchanging a bit of time and money to deliver a product that is above and beyond the specifications is a good choice in this case.

Beware of "scope creep"

> How does a project get to be a year late? . . . One day at a time.
> –Frederick P. Brooks, Jr.

As you continue to define your project's objectives, be on guard against "scope creep"—expanding demands that go beyond the original aims. With scope creep, stakeholders put pressure on a project manager to do more than the project plan originally called for. As you discuss the project with stakeholders, they may begin defining "project success" in ever-lengthening terms and identifying more and more problems that they believe the project should solve. Suddenly, you realize that your list of objectives for the project has grown to alarming proportions.

For example, suppose you're managing a project that focuses on improving an inefficient exhaust system during construction of a particular automobile model. The manager in charge of the model's lighting fixtures asks you to develop sturdier headlights "while you're at it."

To avoid getting caught up in scope creep, resist the urge to solve everyone's problems with your project. Even legitimate or urgent problems that your company needs to address don't belong in your list of project objectives if they lie beyond the project's scope. If stakeholders demand that you increase that scope, make sure they understand the impact on quality, time, and cost.

What is the key to making tradeoffs and redefining objectives as a project progresses? You should do these things only with full understanding of the consequences. And ensure that stakeholders understand—and accept responsibility for—those consequences.

Activity: Managing scope creep

As your team suggests objectives for this project, accept or reject them according to whether or not you believe they are safely within the scope of the project.

Your team is to upgrade your department's IT infrastructure. There are 50 employees in the department, each of whom uses a laptop or desktop computer, and the department also maintains a server. You are to make changes that will increase productivity and efficiency over the long term, without exceeding your budget of $4000 or causing serious disruptions to day-to-day operations.

The following are proposed objectives from your team members. Choose whether each objective would be in scope or out of scope.

We should upgrade our anti-virus and firewall software to their latest versions. This will cost $30 per license. (One license will be needed for each PC.)

- ○ In scope

  Correct choice. This is the kind of simple improvement that the project's mandate calls for. This will require less than half of the budgeted funds and will reduce the risk of unplanned downtime and data loss.

- ○ Out of scope

  Not the best choice. This is the kind of simple improvement that the project's mandate calls for. This will require less than half of the budgeted funds and will reduce the risk of unplanned downtime and data loss.

Would this objective be in scope or out of scope?

Our operating system is the problem. We should consider switching all the computers to a new one. This will cost $229 per license.

- ○ In scope

  Not the best choice. This would require interruptions to the availability of computing resources, and it would exceed the budget.

- ○ Out of scope

  Correct choice. This would require interruptions to the availability of computing resources, and it would exceed the budget.

Would this objective be in scope or out of scope?

Let's establish a more consistent schedule for server backups and maintenance.

- ○ In scope

  Correct choice. This is a simple process improvement that shouldn't require much in terms of time or money.

- Out of scope

  Not the best choice. This is a simple process improvement that shouldn't require much in terms of time or money.

Would this objective be in scope or out of scope?

Why don't we hold a 15-minute refresher course for the office on where to save files and how to name them?

- In scope

  Correct choice. This will improve efficiency without taking up too much time.

- Out of scope

  Not the best choice. This will improve efficiency without taking up too much time.

Would this objective be in scope or out of scope?

We need to replace the current server with something more cutting edge. There are some good options in the $5-10K range.

- In scope

  Not the best choice. This would appear to be a case of using a project as an excuse to compile a wish list.

- Out of scope

  Correct choice. This would appear to be a case of using a project as an excuse to compile a wish list.

Would this objective be in scope or out of scope?

Let's ask around to see which older project files and data can be archived.

- In scope

  Correct choice. This is an unobtrusive, inexpensive improvement that can be made.

- Out of scope

  Not the best choice. This is an unobtrusive, inexpensive improvement that can be made.

Would this objective be in scope or out of scope?

This company isn't as computer savvy as it should be. We should send all employees to a week-long training conference on the latest ways to compute efficiently.

- In scope

  Not the best choice. While such an undertaking might be useful, it is simply too large a task for the narrow project mandate. In addition, it would completely disrupt the department's operations.

- Out of scope

  Correct choice. While such an undertaking might be useful, it is simply too large a task for the narrow project mandate. In addition, it would completely disrupt the department's operations.

Project sponsor

The success of a project hinges in part on the people who participate in it. If the right people are not on board—or if people aren't clear about their roles and responsibilities—the project can fail.

Whether conceptualized by a manager or a team, a project must have a sponsor. The sponsor authorizes the project. He or she should be a manager or executive with a real stake in the outcome and accountability for the project's performance. The sponsor:

- Champions the project
- Has the authority to define the scope of the work
- Provides the project team with necessary resources
- Eliminates organizational obstructions
- Approves or rejects the final deliverables of the project

A project sponsor also performs these critical tasks:

- Ensures that senior management supports the project team's decisions and direction
- Ensures that the project's progress is communicated to the rest of the organization, especially to leadership
- Watches for any changes in company objectives that may affect the project's objectives
- Helps managers resolve any difficulties regarding their direct reports' splitting time between project duties and regular assignments

Project manager

The project manager plans and schedules project tasks and oversees day-to-day project execution. He or she has the greatest accountability for the endeavor's success. This person receives authority from the sponsor and plays a central role in each phase of the project's life cycle.

In many respects, a project manager's tasks resemble those of any manager leading a team. Both individuals:

- Identify needed resources
- Recruit effective participants
- Coordinate activities
- Negotiate with higher-level management, especially the sponsor
- Mediate conflicts
- Set milestones
- Manage the budget
- Keep work on track
- Ensure that project deliverables are provided on time and on budget

Like team leaders, project managers do not always have formal authority over the people participating in the project work.

> For example, the project manager of a new IT initiative may be the IT manager, but the project team members may come from marketing, finance, customer service, and so forth.

Thus project managers must rely on leadership skills to influence team members' behavior and performance.

Leadership Insight: Clarify roles

It's a bit of a cliché to say that we learn more from our mistakes than from our successes, but it's also often true — and I know this from my own experiences. I was on a team a few years ago that taught me a lot. I have about 20 years' experience in the leadership development field, and teamwork is of course a really important piece of leadership, so you'd think I would have known better.

And I could argue that this was a bit of a setup. A guy had put together a team of five people who were meant to be a senior-level team. And once he got us together, even though we didn't know each other, he then exited the scene.

What he told two of us independently was that we were each leader of the team. This created a pretty bad dynamic that we failed to resolve on our own for too long.

I thought that I was team leader; another guy, who was about 10 years older than I was and a former military officer, thought that he was. So he came in, in his way, to that first team meeting and took charge in the way that he thought he was supposed to take charge, and sort of told us all what to do.

My reaction was, "He's pretty bossy. I'm the one who's supposed to be in charge here." So I reacted in my own way, by basically asserting myself. And this put us off on such a bad footing, the way the two of us reacted to each other — and I'm embarrassed to say how long that this went on, so I won't.

But we never actually resolved this issue until a conference call where I was so annoyed with him for what I thought was being so dismissive of me – and, of course, what he was doing was trying to put me in my place — that I actually slammed down the phone and cut him off.

So he called me up later and we finally had the conversation that we should have had quite a while before, which allowed us to share who we were, what our backgrounds were, what we brought in terms of experience and education, what our goals were for the team, and what roles we really felt that we should be playing to make this team a success.

I guess my lesson coming out of that for myself and for anybody else that I work with on teams, is you ignore team process at your peril. And no matter how experienced you are, you always need to pay attention to how you're going to work together as a team and who you are as team members.

Communicate the roles and responsibilities of each team member at the start of the project.

Kate Sweetman
President, Sweetman Consulting

Kate Sweetman is an experienced leadership consultant, educator, author, editor, and speaker. Her coaching and consulting work has ranged from helping to shape more effective senior leaders and management teams in global corporations to supporting entrepreneurs in developing countries as they launch and grow their businesses. Currently, she is an instructor at Massachusetts Institute of Technology's Legatum Center for Development and Entrepreneurship.

She is coauthor of "The Leadership Code: 5 Rules to Lead By" and an expert blogger on leadership for Fast Company magazine. Kate previously worked at Harvard Business School as a research associate, where she taught the Management Communications course. Prior to that, she was an editor at Harvard Business Review.

Through her consulting experience, she has designed large-scale change initiatives at global corporations, working with a broad range of clients including Goldman Sachs, Verizon, Abu Dhabi Investment Authority, and DHL.

Kate holds a bachelor's degree in English from Yale University and a Master of Business Administration from Harvard Business School.

Project team leader

Many large projects have a project team leader. This individual reports directly to the project manager and takes responsibility for one or more aspects of the work. In small projects, the project manager also acts as the project team leader.

An effective project team leader plays six roles:

- **Initiator:** Identifies actions needed to meet project goals. Encourages team members to take those actions.
- **Model:** Demonstrates behavior that supports the project's success. For example, if team members need to interact with customers to complete the project, the team leader regularly travels to customer locations, creates customer focus groups, and so forth. These behaviors encourage other team members to follow suit.
- **Negotiator:** Uses negotiating skills to obtain resources needed for the project.
- **Listener:** Spends as much time listening as talking. Gathers signals from the environment—about impending trouble, employee discontent, and opportunities for gain. Makes decisions informed by the experiences and knowledge of many people.
- **Coach:** Uses coaching to help team members excel; identifies coaching opportunities in the course of everyday business.
- **Working member of the team:** Does a share of the work, particularly in areas where he or she has special competence. Acts as a member of the team.

The tasks of a project team leader include:

- Regularly communicating progress and problems with the project manager.
- Periodically assessing team progress and the outlook of members.
- Making sure that everyone contributes and everyone's voice is heard.

Project team members

Project team members perform most of the work. They should be selected on the basis of their skills and ability to collaborate with others. The primary tasks of project team members are to:

- Complete all assigned tasks on time.
- Communicate dissatisfactions and concerns with the leader and other members.
- Support the leader and other members.
- Help others when they ask, and ask for help when they need it.

The optimal size for a project team depends on the project's goals and tasks. Have just enough people to do the job and no more. Having too few people will slow you down and deprive you of needed skills. Having too many will also slow you down by diverting valuable time and energy into communication and coordination efforts.

Project stakeholders

A stakeholder is anyone who has a vested interest in the outcome of your project. Contributors, customers, managers, and financial staff are all stakeholders; they are the people who will judge the success or failure of the project. To help you identify all the stakeholders in a project, consider what functions or people might be affected by the project's activities or outcomes. Also ask who contributes resources—people, space, time, tools, and money—to the project.

Once you have identified the stakeholders, ask them to spell out what success on the project means for them. Because stakeholders' interests vary, their definitions of success are likely to differ. One of your critical tasks in the defining and organizing phase is to meld stakeholders' expectations into a coherent and manageable set of project objectives.

Elements of a project charter

Having the right cast of characters on a project team is important. But so is having a charter that spells out the nature and scope of the work and management's expectations for results. A project charter is a concise written document containing some or all of the following:

- The project's mission statement
- An outline of the roles and responsibilities that people will play, including the name of the project sponsor
- The scope of the project
- A concise description of project deliverables (objectives)
- The relationship between the project's goals and higher organizational goals
- The expected time frame of the work and milestones
- The budget, allocations, and resources available to the project team
- A list of constraints
- A list of any assumptions that are being made about the project
- Quality requirements
- Major risks
- Benefits of the project to the organization
- The sponsor's signature

The value of a project charter

Does your project have a written charter? Does it contain these important elements? If you're managing a project and you don't have a project charter in place, take steps to create one immediately. At a minimum, ensure that you create a charter for your next project.

It may seem time-consuming to capture all of this information. But without a formal charter in place, a project can head off in a direction that jeopardizes organizational objectives. A project can also suffer "scope creep"—as stakeholders demand more and more from it. A good project charter indicates the desired outcomes of the effort—but not the means by which a group will achieve those ends. The means should be left to the project manager, team leader, and members. If you've recruited people with the right abilities, they'll have the competence to do the job.

Communicating the project charter

Once you've developed a project charter, distribute it to all stakeholders and project team members. The charter spells out *in writing* the nature and scope of the work that is being undertaken, as well as management's expectations for results. Failure to disseminate this information could lead to misunderstandings and set the project up for failure.

Key Idea: Use the work breakdown structure

Key Idea

Many projects fail either because someone has overlooked a significant part of the work or managers have grossly underestimated the time and money involved. One tool that many project managers find helpful in planning is the Work Breakdown Structure.

The Work Breakdown Structure (WBS) helps you develop estimates, assign personnel, track progress, and show the scope of the project work. With a WBS, you subdivide a complex activity into smaller tasks, continuing until the activity can no longer be subdivided. At that point, you have defined each task in its smallest—and most manageable—unit.

To create a WBS:

- Ask, "What has to be done to accomplish X?"
- Continue to ask this question, breaking those tasks into the smallest possible subtasks, until your answer represents a component or task that cannot be subdivided further.
- Estimate how long it will take to complete each of these tasks and how much each will cost in terms of dollars and person-hours.

When developing a WBS, many managers wonder when to stop subdividing the activities. As a general guideline, stop when you reach the point at which the work will take an amount of time equal to the smallest unit of time you want to schedule. Thus, if you want to schedule to the nearest day, break down the work to the point at which each task takes a day to perform.

A WBS typically consists of three to six levels of subdivided activities. The more complex the project, the more levels the WBS will have. As a general rule, no project should have more than 20 levels—and only an enormous project would have that many.

In the first phase of project management—defining and organizing the project—don't worry about the sequence in which the project activities are performed. Use the WBS during the first phase only to build a rough framework of activities.

A complex project may have dozens of steps. How do you keep track of what's been done and what the next step is?

Leadership Insight: The equation for change

When people think about project management, they tend to think about Gantt charts, an elaborate matrix of who's going to do what when and tracking spending, tracking finances, tracking deadlines, making sure everything gets done.

And it's true, all of those things are really important. But one of the things that often gets forgotten is: Are you in fact managing the impact that the project is having, particularly in the arena of change, and the effect of the project on people and on the organization?

Most projects are in fact creating change of some kind. Either they're creating change by the nature of the technology or the project, the content of the project, or they're creating change in terms of the impact on the larger environment on the organization.

So one of the things that I've found really useful in project management is tracking what I think of as the major three components of a change effort. They derive from a kind of a age-old axiom called the "equation for change," which says that you get change in an organization or a person when you have a clear picture of where you're going, when you have an understanding of felt pain, a sense of motivation of why we need to change, and a very clear idea of what to do next. That is, "What am I going to do differently?"

And so when I'm thinking about a project, particularly a large project, like the installation of a new IT system or the moving of a building or changing the location of an organization to another building, those kinds of projects, it's really important to pay attention to these three activities.

Mapping out not only against time and people and money, but also: Are we doing, every week of this project, things that are strengthening and reinforcing the vision of where we're going? Are we doing things every week in this project that are helping people understand why they have to change, what the pressure is to change, what the advantage is of the change? And are we doing things every week, on a regular basis, that help people get ready to take the next step, to know what to do next?

I find that when we track a project in that way, as well as in the traditional ways, we have a much greater likelihood of success and a positive outcome. And we get great feedback from people who are affected by the project; they in fact are reminded why they have to do this. They're reminded of what's going on and the need to change. And they're reminded of what it is that they in fact need to be doing differently right now on Monday morning.

So I encourage people to do both kinds of tracking on project management.

Because most projects create change of some kind, project managers need to communicate a clear picture of where the team is going and what to do next.

June Delano
Founding Partner, The ClearLake Group

June Delano is a Managing Partner of Pivotal Leadership, a leadership consulting firm in Southeast Asia, and a Founding Partner of The ClearLake Group, a global advisory firm focused on strategy and organization.

June has consulted in many industries and has led projects in Asia, Europe, Latin America, and the Americas. She is known for a deep understanding of the relationship between strategy, culture and learning, as well as ground-breaking approaches to leadership development.

She was a leader of the executive development practice at The Monitor Group, and previously held multiple positions at the Eastman Kodak Company, including Director of Worldwide Learning and Development, and Director of Executive and Management Development.

She has authored multiple articles, including "Communicating Across Differences: The Case for Becoming a Cosmopolitan Coach," published in the International Journal of Coaching in Organizations.

June holds a Bachelor of Arts in journalism from Michigan State University and a Master of Science in organization development from American University. She has studied psychology, leadership, and organization development at The Fielding Institute, the Gestalt Institute of Cleveland, and NTL Institute.

Estimate time

Once you are satisfied with the breakdown of tasks, ask: How much time will it take to complete each task?

If a task is familiar—that is, employees have done it many times before—estimating completion time will not be difficult. Unfamiliar tasks, in contrast, require more thought and discussion. Here are a few tips for making time estimates:

- **Using experience.** Base estimates on experience, using the average expected time to perform a task. The more familiar you or other employees are with a particular task, the more accurate your estimate will be.
- **Keeping estimates as estimates.** Remember that estimates are just that—estimates. They're not guarantees, so don't change them into firm commitments quite yet.
- **Clarifying assumptions.** When presenting estimates to stakeholders, make sure they are aware of all the assumptions and variables behind those calculations. Consider presenting time factors as ranges instead of fixed estimates. For example, say, "Task A will take eight to twelve hours to complete." Any fixed estimate is bound to be wrong; a range, on the other hand, is more likely to be right, because it accounts for natural variations.
- **Padding.** Padding estimates is an acceptable way of reducing the risk that a task (or the entire project) will take longer than the schedule allows. But apply this practice openly and with full awareness of what you're doing. For example, if your estimate is based on receiving certain products within a two-week period, make sure that expectation is clear. That way, the project team and stakeholders know there is a chance those products may not arrive on time. Also let them know what the consequences of a late arrival would be.

Estimate costs and identify needed skills

Once you've estimated time, consider each task's potential costs. Ask what financial and other resources you'll need, and which skills will be necessary. Your answers will indicate the level of resource commitments the organization must make to support the project. You'll also gain a clearer picture of who should participate on the project team. If the required skills are not available within your organization, you'll have to acquire them through training, hiring, and/or contracting with independent specialists—all of which you'll have to factor into the project's costs.

Your WBS will give you a rough estimate of how much time, how many people, and what skills you'll need for the project. These estimates form the foundation for the next phase in the project life cycle —planning the project.

Recruit a new project team

In the second phase of project management, planning the project, you translate your high-level estimates into action. Your time estimates become schedules. Your cost estimates become budgets. And you bring your team together and assign tasks.

If you have not yet assembled your project team, you should assess the skills needed for the project using the information you generated from the Work Breakdown Structure. Then recruit the right people from inside or outside your company.

Look objectively at each task and determine exactly what skills are needed to get it done. For example, if your task is to create an online customer survey about a new product, you may decide that your team must include members with Web programming, market research, and customer service skills.

Next, look at the people in your organization and determine who has the right skills needed for the project. Skills come in numerous forms, including the following:

- **Technical:** expertise in specific areas, such as market research, finance, software programming
- **Problem-solving:** the ability to analyze difficult situations and craft solutions that others may not see
- **Interpersonal:** the capacity to work effectively with others
- **Organizational:** understanding the company's political and logistical landscape, and forming networks of contacts throughout the organization
- **Developmental:** the ability to master new skills as needed
- **Communication:** the ability to effectively and efficiently exchange information and listen to others

Make assignments according to the best matches between skill and task. You may need to provide training for people who need additional skills or hire someone from outside. Don't forget to budget time and money for any training or hiring needed to cover skill gaps.

Leadership Insight: Choose the right people

Project management, if done well, can really be an exciting process. And once again, we start with a strategic plan. We want to have an good idea of what it is that we want to achieve, and once we really can articulate our goal carefully, we can work backward and figure out what needs to be done, what are the steps that need to be taken, and who needs to be brought along to make sure that this project is a success. There are lots of tools in place, lots of software, Gantt charts, everything that you need to manage all the various pieces of the project. So as a leader, really my most important job is putting together the perfect project team.

So as we identify the steps that need to be taken and the people who need to be brought along and need to buy into the project, we think about putting those kinds of people on the team. I don't need to be the smartest person in the room, but I need to have the smartest people in each area involved in that project.

And it's a real thrill for me as a leader to give those people a kernel of an idea and see what really bright people can do with that. So at Mass General, one of the efforts and one of the really most thrilling things that we have done there was putting together an innovations taskforce, so the MGH has really built its history and its reputation on its innovation.

So what do we need to do to nurture innovations in our laboratories and in our clinical practices and make sure that they get out to the benefit of our patients? What do we need to do for

that? And also for technologies that are developed elsewhere, where do we want to be on the adoption curve?

We want to make sure that we are picking something up if it is state-of-the-art and it has an evidence base to justify the cost, but we really want to be a slower adopter until some of those things have established the track record.

So we put together a team of scientists, administrators, nurses — and sometimes we even brought patients in who are users. And we had that group look at it and say, "You know what, Allison? You were asking the wrong questions. You should have been asking about this and that and what's happening in the field and who is using what technologies and how would that apply here and where is there value add-in."

That team went and they started to ask the right questions and they put together in a plan that was so exciting that years later it is still forming the basis of our innovation strategy. And it is driving the decision making on a regular basis at the Mass General Hospital.

Tap into the ideas, skills, and experience of your team members and invite them to help frame the key questions.

Allison Rimm
Senior Vice President of Strategic Planning and Information Management, MGH

Allison Rimm is the Senior Vice President of Strategic Planning and Information Management at Massachusetts General Hospital.

In addition to her work at the hospital, Allison is the President and CEO of Allison Rimm and Associates, LLC, which provides coaching and management consulting services to visionary organizations seeking to harness the power of their employees.

Her consulting practice focuses on matching the needs of organizations with the skills, talents, and passions of their workforce to drive extraordinary business performance and to create teams that are joyfully committed to their collective mission.

She has merged her passion for teaching and coaching with her strong executive skills to create the popular Business of Life workshops. These experiential workshops teach participants how to apply the principles of strategic planning to achieve their personal and professional goals. Her Web site is: www.allisonrimm.com.

Work with an existing project team

If a team already exists for your project, you'll need to do the best you can with the available talent. That means assessing people's skills and matching them to the task list, and using training to fill in skill gaps.

If you have worked with the team members before and know their individual strengths, make task assignments yourself. If you're unfamiliar with members' individual capabilities, create two lists: one

with the names of all the people assigned to the project team, and another with all the skills required to successfully complete the work.

At your next team meeting, go through these lists. Encourage people to talk about their own skills, and give the group responsibility for initially assigning people to the listed tasks. Determining assignments in a group setting:

- Allows people to know what one another's skills are
- Ensures that the right person is assigned to the task
- Helps team members understand the finite resources they have available

Most experts on team creation maintain that you'll rarely get all the skills you need on the team. Something will always be missing. And in most cases, it is impossible to anticipate every skill needed. Thus, the savvy project team leader looks for people with both valued skills *and* the potential to learn new ones as needed.

Identify cost categories

A budget is the financial blueprint or action plan for the project. It translates the project plan into measurable expenditures and anticipated returns over a certain period of time.

When developing a budget, first ask yourself: What is it going to take—in terms of resources—to successfully complete this project? To determine the cost of the project, break it down into the key cost categories you anticipate. Here are the typical categories in which projects generate costs:

- **Personnel.** This is almost always the largest part of a project's budget and includes full-time and temporary workers.
- **Travel.** People may have to travel from one location to another in the course of their project work. Is everyone onsite, or will the team need to gather at one locale? Don't forget to budget for meals and lodging.
- **Training.** Will training be required? If the answer is yes, will that training take place onsite or will there be travel expenses involved? If you plan to hire an outside contractor to provide the training, the budget must reflect his or her fees and expenses.
- **Supplies.** In addition to the usual—computers, pens, papers, and software—you may need unusual equipment. Try to anticipate what the project will require.
- **Space.** Some people may have to be relocated to rented space. How much room and money will that require?
- **Research.** Will you have to buy studies or data to support this project? How much research will your team have to perform itself? At what cost?

- **Professional services.** Will you have to hire a market-research firm? Do you plan to bring in a consultant or seek legal advice? The budget must reflect the cost of each of these.
- **Capital expenditures.** What more expensive equipment or technical upgrades will be necessary to do the job? Will any capital expenditures pay for themselves, and how?

Consider other potential variables

> You get the answers for the questions that you ask.
> –Dr. J.M. Juran

Once you've entered the hard-and-fast figures from these standard categories into your project budget, consider frequently overlooked variables that could affect the budget.

For example:

- Training costs to bring team members up to speed
- Training costs at the back end to teach users to implement your project
- Ongoing personnel costs
- Ongoing maintenance costs for space
- Costs for insurance
- Licensing fees
- Costs for outside support such as accounting or legal counsel

Determine whether the project should proceed

To complete the project budget, you estimate costs before the work actually begins. Thus creating the budget gives stakeholders and the other project management players a chance to ask themselves whether they really want to move ahead with this project, given the costs.

The sponsor, for example, may wish to reconsider the project or reduce its scope once he or she sees the cost estimates. If the sponsor is unwilling to fully fund the budget, the project manager—and anyone else accountable for the success or failure of the effort—may wish to withdraw. Projects that are not fully funded are imperiled from the very beginning.

Build in contingency funds

In most cases, project budgets contain some degree of flexibility. Because it's extremely difficult to anticipate every expense in a project, flexibility is valuable during budget creation.

Flexibility can actually make a project manager more effective. The best managers make changes to get around roadblocks and seize valuable opportunities as their projects move forward. For these reasons, many project managers build some contingency into their budgets. They ask for 5% of the estimated budget for contingency alone. This extra "wiggle room" enables them to accommodate some unanticipated costs without having to beg the project sponsor for more funding.

Once you've launched your project, you can use the budget to monitor progress by comparing the actual outcomes of your project with the budgeted, or expected, outcomes. This monitoring and evaluation process in turn helps you and your team to take timely, corrective action to get a wayward project back on track.

Create a draft schedule

To sequence and control the activities entailed by your project, you need to establish a schedule. Start by putting together a reasonable draft schedule using the following steps.

1. **Define tasks using the Work Breakdown Structure.**

   Revisit the activities and tasks you outlined when creating your WBS in the first phase of project management—defining and organizing the project.

2. **Examine the relationships between tasks.**

   Many project activities must be done in a particular sequence. Others can be performed in parallel. To reduce the overall time required by your project, look for opportunities to accomplish different activities in parallel.

3. **Create the draft schedule.**

   List the required tasks, estimate how long each task will take to complete, and indicate the task relationships (which ones must be done in what sequence, and which can be done in parallel). You'll refine this draft schedule once everyone has reviewed it.

Tools to create a schedule

Activity: Survey the critical path

A critical path diagram helps you determine the time needed to complete a project. Show that you know how to interpret one of these diagrams accurately.

Critical paths help determine the time needed to complete a project.

For a theoretical project, the critical paths can be represented thus, moving from the project start (point A) to the project end (point I). Point A simultaneously fans out to points B, C, D, and E, taking 5 days between A and each of these four points.

These four points generate their own sub-paths before ultimately re-converging at point H. Point B leads to point F in 20 days, and F to H in 15 days. Point C leads directly to H in 25 days. Point

D leads to G in 15 days, and G to H in 10. Point E leads to G in 20 days, and G to H in 10. H leads to I in 15 days.

What is the critical path in this project?

- A-D-G-H-I

  Not the best choice. The critical path in a project is the linear sequence of tasks necessary for the completion of the project that will take the longest time to accomplish. This diagram shows that there are project paths that will take a longer time to complete than A-D-G-H-I.

- A-C-H-I

  Not the best choice. The critical path in a project is the linear sequence of tasks necessary for the completion of the project that will take the longest time to accomplish. This diagram shows that there are project paths that will take a longer time to complete than A-C-H-I.

- A-B-F-H-I

  Correct choice. The project path A-B-F-H-I is the linear sequence of tasks necessary for the completion of the project that will take the longest time to accomplish. Thus, it is the critical path.

For a theoretical project, the critical paths can be represented thus, moving from the project start (point A) to the project end (point I). Point A simultaneously fans out to points B, C, D, and E, taking 5 days between A and each of these four points.

These four points generate their own sub-paths before ultimately re-converging at point H. Point B leads to point F in 20 days, and F to H in 15 days. Point C leads directly to H in 25 days. Point D leads to G in 15 days, and G to H in 10. Point E leads to G in 20 days, and G to H in 10. H leads to I in 15 days.

If all goes according to schedule, how long will this project take?

- 55 days

  Correct choice. The total length of the project is equal to the length of the critical path, which, in this case, is A-B-F-H-I.

- 80 days

  Not the best choice. The total length of the project is equal to the length of the critical path, and no project path in this diagram totals 80 days.

- 50 days

  Not the best choice. The total length of the project is equal to the length of the critical path. Although the total time required for the project path A-E-G-H-I is 50 days, this is not the project's critical path.

For a theoretical project, the critical paths can be represented thus, moving from the project start (point A) to the project end (point I). Point A simultaneously fans out to points B, C, D, and E, taking 5 days between A and each of these four points.

These four points generate their own sub-paths before ultimately re-converging at point H. Point B leads to point F in 20 days, and F to H in 15 days. Point C leads directly to H in 25 days. Point D leads to G in 15 days, and G to H in 10. Point E leads to G in 20 days, and G to H in 10. H leads to I in 15 days.

If the time between task D and task G increases by 5 days, how will this affect the total time necessary to complete task G?

- It will increase by 5 days.

  Not the best choice. There are two project paths leading to the completion of task G: A-E-G and A-D-G. The total time of path A-E-G is 25 days, while the total time of path A-D-G is 20 days. If the time between task D and task G increases by 5 days, then the total time of path A-D-G will become 25 days. Since this is not more than the 25 days necessary for path A-E-G, the total time necessary to complete task G does not increase.

- It will stay the same.

  Correct choice. There are two project paths leading to the completion of task G: A-E-G and A-D-G. The total time of path A-E-G is 25 days, while the total time of path A-D-G is 20 days. If the time between task D and task G increases by 5 days, then the total time of path A-D-G will become 25 days. Since this is not more than the 25 days necessary for path A-E-G, the total time necessary to complete task G does not increase.

- It will decrease by 5 days.

  Not the best choice. An increase in the amount of time between two tasks will never decrease the amount of time needed to complete a task.

For a theoretical project, the critical paths can be represented thus, moving from the project start (point A) to the project end (point I). Point A simultaneously fans out to points B, C, D, and E, taking 5 days between A and each of these four points.

These four points generate their own sub-paths before ultimately re-converging at point H. Point B leads to point F in 20 days, and F to H in 15 days. Point C leads directly to H in 25 days. Point D leads to G in 15 days, and G to H in 10. Point E leads to G in 20 days, and G to H in 10. H leads to I in 15 days.

If the time between task G and task H increases by 10 days, how will this affect the total time necessary to complete the project?

- It will increase by 10 days.

  Not the best choice. Although the time between tasks G and H increases by 10 days, the total time needed to complete the project will only increase by the amount that path A-E-G-H-I becomes longer than the critical path A-B-F-H-I.

- It will increase by 5 days.

  Correct choice. Currently, the critical path in the project is A-B-F-H-I, which takes 55 days. If the time between tasks G and H increases to 20 days, then the project path A-E-

G-H-I will take 60 days total. Since this is 5 days more than the current critical path, the total time needed for the project will increase by 5 days.

○ It will not increase.

Not the best choice. Increasing the time between tasks G and H by 10 days makes path A-E-G-H-I longer than the critical path. That increases the amount of time necessary to complete the project.

Select the right tool

How do you decide which scheduling tool or method to use to create your draft schedule? Select the one you're most comfortable with, as long as it does the job. Don't use a tool just because everyone else does or because it's the latest thing. To choose a method, look at how you're currently tracking and scheduling your own work. Are you satisfied with it? If you are, consider using this system to schedule your project. But remember that you'll need to communicate the schedule to all team members.

Also, keep in mind that a number of software packages are available to help you develop and manage your schedule. To figure out which software is best for you, get recommendations from users. Unless you are already familiar with the software, build time into your personal schedule to learn it. You may need to get reliable training and technical support for the program.

Optimize your schedule

With your team, critically examine your draft schedule and seek ways to make it more accurate, more realistic, and tighter. Look for the following:

- **Errors.** Are all time estimates realistic? Pay particular attention to time estimates for tasks on the critical path. If any of these tasks cannot be completed on time, the entire schedule will unravel. Also, review the relationships between tasks. Does your schedule reflect the fact that some tasks can start simultaneously and that others cannot start until some other task is completed?
- **Oversights.** Have any tasks or subtasks been left out? Has time for training and maintenance been overlooked?
- **Overcommitments.** Will some employees have to work 10 to 12 hours per day for months on end to complete the tasks assigned to them in the schedule? Are you expecting a piece of equipment to perform in excess of its known capacity? To remove such overcommitments, redistribute the workload.
- **Bottlenecks.** Will work necessary for a particular task pile up at that point in the process? Think of an auto assembly line that has to stop periodically because the people who install the seats cannot keep up with the pace of the line. To remove bottlenecks, you'll need to improve the work process used in that task (that is, speed it up) or to shift resources into that task—for example, by adding more people or better machinery.

Your overall goal in optimizing your schedule is to tighten it as much as possible, within reason. Because tasks on the critical path define the duration of the entire project, look carefully at them for

opportunities to shorten the schedule. By shifting more resources to tasks on the critical path, you may be able to remove a bottleneck. Consider diverting resources from noncritical tasks to the more critical ones. For example, if you have four people working on a task that has four to five days of slack time, shift some or all of those people onto a critical-path task for several days.

Make the most of meetings

Hold regular meetings

Meetings are typically the least favorite activity of busy, action-oriented people. However, they are often the best way to communicate information. Meetings provide forums within which project team members can share ideas and make decisions. To make the most of meetings, stick to a regular schedule as much as possible. If people know that project team meetings take place every Monday from 3 to 4 p.m., for example, they can plan their other responsibilities around those times. Having a regular schedule also saves meeting organizers the frustrating task of finding a time when everyone is available.

Write meeting minutes

If you're managing a sizable project with plenty of meetings and many participants, you can easily lose track of what has been done and what hasn't, who has agreed to things and who hasn't. To avoid this scenario, systematically keep track of decisions, assignments, and action items. Many organizations use meeting minutes—notes recorded by an appointed individual—for this purpose. The minutes are reviewed and approved at the next meeting and amended if necessary. Approved minutes then go into a file, where participants can consult them as needed.

Draft progress reports

In addition to writing meeting minutes, many project managers create progress reports that track all the work that's being done on a project.

> For example, if you're overseeing the development of a new product line, you might write a progress report that updates team members on the R&D testing under way, the marketing specialists' survey findings on customer needs, and the financial analysts' latest forecasting of projected revenues.

As with meeting minutes, be sure to file progress reports in an orderly way that makes them accessible to whoever needs the information.

Key Idea: Communicate with stakeholders

Key Idea

Project stakeholders want continuous updates, status reports, and progress reports. Understanding these individuals' expectations, making tradeoffs among their demands to create a feasible project scope, and keeping them continuously informed are vital for achieving your project objectives. Establish a plan to communicate with key stakeholders on a regular basis, for example by holding a monthly meeting supplemented with weekly status reports. At a minimum, you will want to meet with stakeholders to:

- Identify project goals
- Alert them of changes in the project's objectives, the consequences of those changes in terms of quality, time, and costs, and to verify that they accept responsibility for those consequences
- Clarify assumptions about projected costs and completion dates
- Obtain feedback on the project management process after the project is completed

In communicating about the project with stakeholders, be aware of the common tendency to downplay or hide problems as they come up. If you give in to this tendency and the problems sabotage the project (in the stakeholders' eyes), you'll be in twice as much trouble as you would have if you had alerted stakeholders in the first place.

You and your team aren't the only ones interested in keeping the project on track. You need reliable ways of keeping your project stakeholders in the loop.

Make team communication ongoing and two-way

While it is important to share information when managing a project, it's equally vital to listen to what others have to say. Take the time to ask team members how they are doing and how they perceive the project. When you listen to their concerns and invite their viewpoints, you help keep them motivated and invested in the project at hand.

Leadership Insight: Define success upfront

So my most memorable moment was straight out of college, and it was my first job. I was sitting in a review of a marketing plan that had been agreed some months before I had arrived, and the guys around the table — the brand managers, the marketing manager — were all there agreeing, looking at the results and how we arrived at where we all thought we were going to be after the program had been executed.

And what struck me was that, as the brand managers went through their results, the results were quite different — in fact very different — from what the marketing manager had thought was going to be the end result. And it really struck me that as the marketing manager dug deeper as to why that was the case it wasn't because the guys wanted to do something

different – it was that their definitions of what was success at the end, or would be success at the beginning, was different. Their interpretation of what a success was quite different.

So, as an analyst brand-new out of a college, the biggest thing I learned was make sure at the very beginning that when you are doing the analysis to define what success will be, that you make sure you sit down with your own manager, you sit down with the managers you are meant to be working with, and let everybody understand what it is that definition of success should be.

And the final thing I took from it as a young analyst many years ago was that you should never be afraid to ask the questions, particularly when it pertains to information and data, because you can act as an independent honest broker with people who rely on you for data.

So that was the biggest lesson for me and certainly something that has been a kind of cornerstone of my career, which is: When in doubt, check and look at the information, because it can be that the defining moment — defining moment is a wrong word — but it can be critical when it comes to getting people to agree or not agree.

Problems can arise when members of a team have different definitions of success.

Adrian Beggan
Director, Sales and Market Intelligence, Google

Adrian Beggan is a Director of Sales and Market Intelligence for Google Inc., based in Dublin, Ireland. In his role at Google, he leads the design, development, and implementation of the Global Sales and Market Intelligence platform.

Prior to his time at Google, Adrian was Director of EMEA Business Intelligence for Dell Inc. His seven years at Dell culminated in establishing EMEA as the global template for the marketing database and business intelligence function.

Adrian began his marketing career at Guinness Ireland Group, where he worked as a marketing analyst and implemented a national customer database for Guinness Clothing and Merchandising.

Adrian received his Bachelor of Science in management science from Trinity College Dublin and his Master of Business Administration from University College Dublin. He also attended Harvard Business School's High Potential Leadership Program and is enrolled in the Master of Science in Economics program at Trinity College Dublin.

Hold a launch meeting

Once you've drafted a project charter, assembled a team, and scheduled the project work, you're ready to enter the third phase of project management—executing the project. Start by launching the project.

The best way to launch a project is through an all-team meeting. While you and your project team will have discussed the project extensively and engaged in detailed planning before the launch meeting, there is no substitute for a face-to-face gathering attended by all team members. Be sure to include the project sponsor.

Physical presence at this meeting has great psychological value, particularly for geographically dispersed teams whose members may have few future opportunities to convene as a group. Being together at the very beginning builds commitment and bolsters each participant's sense that the team and project are important.

During your project's launch meeting, strive to accomplish the following tasks:

- Define roles and responsibilities.
- Review the project charter.
- Seek unanimous understanding of the project charter.
- Have the project sponsor explain *why* the project's work is important and *how* its goals are aligned with the larger organizational objectives.
- Outline the resources that will be available to the team.
- Describe team incentives.

Key Idea: Monitor the project's budget

Key Idea

One way to monitor project activities is to compare the actual spending results for a given period with the spending specified in your budget. The difference between actual results and the results expected by the budget is called a variance. A variance can be favorable when the actual results are better than expected—or unfavorable when the actual results are worse than expected.

If evaluation reveals that the project's spending is on target, with actual results matching the budget's expected results, then you don't need to make adjustments. However, if actual results compare unfavorably with the expected results then you must take corrective action.

> For example, suppose your team expected to pay outside consultants $24,000 in July, but you find that actual payments totaled $30,000. In this case, you would need to

investigate the reason for this discrepancy and possibly correct the situation.

When monitoring actual costs against your estimates, watch out for these common contingencies that can send your project over budget:

- Failure to factor in currency exchange rates or to predict fluctuations in exchange rates
- Unexpected inflation during long-term projects
- Lack of firm prices from suppliers and subcontractors
- Estimates based on different costing methods; for example, hours versus dollars
- Unplanned personnel costs used to keep the project on schedule, including increased overtime
- Unexpected space or training needs
- Consultant or legal fees needed to resolve unforeseen problems

Most of these contingencies could not have been predicted before your project began. That's why you need to stay alert to the real numbers as they come in. Watch for significant deviations from the budgeted amounts. Then find out the reason for the differences and take corrective actions.

You can't spend your way out of every problem. More often than not, your project budget will be tight, and, as manager, it's your job to keep your team to it.

Analyze and investigate variance

You can use variance analysis to evaluate different aspects of a project, such as:

- **Hours:** How much work effort has been expended on any given activity? Does the number of hours expended match the number specified in the budget? If not, why not?
- **Activities:** Which activities have been worked on? When did they start? Are they complete? Were they finished on schedule? If not, why not?
- **Milestones:** Have milestones been met? If so, which ones? If not, why not?
- **Deliverables:** Have deliverables been completed on time? Did they meet quality standards? What caused any shortfalls?

There are many causes of variance. Here are just a few:

- Vague project objective
- Ambiguous project scope
- Overly optimistic schedule
- Incomplete project plan
- Failure to manage risks
- Lack of proper tracking and control
- External forces
- Unforeseen events

What should you do if you detect unfavorable variances? In general, you need to investigate them immediately. Revisit tasks and times outlined in your project plan and budget. Challenge assumptions, deadlines, resource allocations, and stated deliverables. Ask yourself: Why did this variance occur? Is it likely to repeat itself? What corrective measures are called for?

Corrective actions may include requesting a change in resources, fast-tracking the schedule, or persuading the sponsor to accept the variance. With any corrective action, don't try to develop the action yourself; draw on the insights of the people closest to the problem as well.

Some ways to control variances and keep your project on track are conducting periodic quality checks, tracking milestones, and building a suitable monitoring or control system.

Activity: What went wrong?

Any number of factors can cause your project's actual budget to deviate from projections. See if you can identify causes of variance.

You work for a major advertising firm. Between the months of January and June, your firm developed and launched a new campaign for Grumpleman's All-Natural Botanical Soap. Looking back, you see that your team was significantly over budget at various points during the project. Now you are trying to identify the contributing factors.

One member of your team, Ben, attempts to explain the budget variance in February and March. "That was the creative development phase of the project. I think most of the variance in that period is due to overtime hours. The team went overboard on research and brainstorming work, because we thought our objective was to rethink Grumpleman's entire advertising strategy, not just to create new ads in line with their current strategy. We also thought that we'd be doing magazine and billboard ads in addition to TV spots. It didn't help that James left the firm in February; losing a team member meant that everyone else had to work more hours."

Which of the following root causes of variance has Ben *not* identified?

- Vague project objectives

  Not the best choice. The team did not know whether their job was to rethink Grumpleman's entire advertising strategy or just to produce some new ads for the company. This suggests that they were never given a clear project objective.

- Ambiguous project scope

  Not the best choice. The team thought that they should be conceiving of magazine and billboard ads in addition to TV spots. This suggests that they did not have a clear idea about the scope of the project.

- Failure to manage risks

  Correct choice. Nothing in Ben's story suggests that the team failed to manage risks.

- Unforeseen events

  Not the best choice. James's departure was an unforeseen event that hurt the team and drove costs up.

Allison, another member of the team, attempts to explain the major budget variance in May: "We had planned to wrap up shooting the new commercial spots in April. It turned out that filming continued into early May. Also, the client was adamant about buying ads during ABS's Wednesday prime time lineup, but ABS suddenly increased the price of those ads because of

their successful new programs. We have to take some of the blame for this, though. Usually we budget extra amounts in case prices increase; I don't know why we didn't in this case."

Which of the following root causes of variance has Allison *not* identified?

- An incomplete project plan

  Correct choice. Nothing in Allison's story suggests that the project plan was incomplete.

- Failure to manage risks

  Not the best choice. Usually, the team allocates extra money in the budget to cover price increases. But Allison noted that this risk management strategy wasn't used in this particular case.

- External forces

  Not the best choice. The pressure from the client to run ads during ABS's Wednesday prime time lineup was an external force contributing to the high budget variance in this month.

- Overly optimistic schedule

  Not the best choice. The team expected filming of the TV ads to be completed in April, which proved to be too optimistic. The filming continued into May.

Conduct quality checks

To make a quality check, you examine some unit of work at an appropriate point to ensure that it meets specifications. For example, if your project entails building a new e-commerce site, you, as the project manager, may want to test components of the software system as they are developed. That way, you can see whether they function according to plan.

Periodic quality checks uncover conditions that are out of specification. Once you've identified these problems, your project team can identify and address the causes. Subsequent tasks' outcomes are then more likely to meet quality standards.

Consider these guidelines for achieving high-quality products and results:

- Don't rush quality checks to meet deadlines. The cost of fixing problems after the fact is usually far greater than the cost of confronting and solving them *before* they spin out of control.
- Determine quality benchmarks in the planning phase. Take into account things such as your organization's policies regarding quality, stakeholders' requirements, the project's scope, and any external regulations or rules.
- Inspect deliverables using the most appropriate tools; for example, detailed inspections, checklists, or statistical sampling.
- Accept or reject deliverables based on previously defined measures. Rejected deliverables can be returned or reworked, depending on costs.

Track milestones

Milestones, or significant events in a project, remind team members of how far they have come and how much further they must go. They may include completion of key tasks on the critical path. Here are a few examples:

- The sponsor's acceptance of a complete set of customer requirements for a new service
- The successful testing of a product prototype
- Installation and successful testing of a critical piece of equipment
- Delivery of finished components to the stockroom
- Completion of the project—the ultimate milestone!

Milestones should be highlighted in the project schedule and used to monitor progress. You can also use them as occasions for celebrating progress when celebration is called for. Some project teams recognize milestones with a group luncheon or a trip to a sporting event.

Build a monitoring/control system

Budgets, variance analysis, quality checks, and milestones are basic monitoring and control devices that apply generally to projects. But there may be other methods that apply specifically to your situation. Do you know that they are? If you don't, here are some guidelines for selecting and implementing them:

- **Focus on what is important.** Continually ask: What is important to my organization? What are we attempting to do? Which parts of the project are the most crucial to track and control? Where are the essential points at which we need to place controls?
- **Build corrective action into the system.** Your control system must use information to initiate corrective action; otherwise, all you are doing is monitoring. If quality is below standard, set up an ad hoc group to determine the cause and fix the problem. But don't let control lapse into micromanagement. Encourage the people closest to the problem to make the needed corrections.
- **Emphasize timely responses.** Corrective actions require real-time, daily, or weekly information about what's going on with your project.

No single control system is right for all projects. A system that's right for a large project will swamp a small one with paperwork, while a system that works for small projects won't have enough muscle for a big one. So, find the one that's right for your project.

Three steps for managing risk

Every project contains risks—for example, a supplier to whom you've outsourced an important task falls a month behind schedule or a key member of your project team is suddenly hospitalized for several weeks. While executing your project, you need to practice risk management: identifying key risks and developing plans for preventing them or mitigating their adverse effects. Some risks are relatively easy to anticipate; others are very difficult.

To manage anticipated risks, apply this process:

1. Conduct a risk audit
2. Take actions to avoid or minimize risk
3. Develop contingency plans

Key Idea: Conduct a risk audit

Key Idea

Conduct a systematic audit of all the things that could go wrong with your project. A risk audit involves the following steps:

- **Collect ideas widely.** People's perspectives about risk differ greatly. Some foresee perils that others miss entirely. By talking with project team members, customers, or suppliers, you may harvest some surprising information. For example, a supplier may tell you that a rival company is working on a product for the same market that your team is working on—and that the competitive product development team is much further along than yours.
- **Identify internal risks.** Understaffing can be a source of risk. One key resignation, for example, could cause an important project to collapse. Poorly trained quality assurance personnel represent another source of internal risk. Their substandard work may allow defective or dangerous products to reach customers, resulting in a costly product recall, lawsuits, and a public relations fiasco.
- **Identify external risks.** An external risk may take the form of an emerging new technology that will render your new product line obsolete. An impending regulatory change may also pose a threat. External risks are numerous and often hard to spot. Some large technology companies maintain small "business intelligence" units to identify these threats.

As you conduct your risk audit, pay particular attention to areas with the greatest potential to harm your project. Depending on the project, these areas might include health and environmental issues, technical breakdowns, economic and market volatility, or relationships with customers and suppliers. Ask yourself where your project is most vulnerable. Then consider these questions: What are the worst things that could go wrong in these areas? Which risks are the most likely to surface?

The best way to minimize the impact of problems on your project is to anticipate them. How can you plan for complications that might arise?

Take actions to avoid risk

In the most drastic cases, you may alter your project's scope to avoid risks that the organization is not prepared to confront.

For example, a sausage maker, fearful of bacterial contamination somewhere in the production or distribution channel, may decide to produce only precooked and aseptically packaged meats.

In another case, you may take positive steps to prevent risks from escalating into full-blown crises.

For example, if you are concerned that a key project member may leave the company, consider taking these steps:

- Make sure the project member has a visible and attractive future within the company.
- Start preparing and training employees to fill that person's place in the event that he or she leaves.
- Distribute important tasks among several reliable project team members.

Develop contingency plans

Some risks cannot be avoided. Others can be reduced, but only in part. Develop contingency plans for unavoidable and uncontrollable risks. A contingency plan is a course of action you prepare in advance to deal with a potential problem. It answers this question: "If _____ happens, how could we respond in a way that would neutralize or minimize the damage?" Here is an example of a project contingency plan:

The Acme Company set up a two-year project to modernize its manufacturing facilities. Senior management regarded the two-year deadline as crucial. Recognizing the real risk that the deadline might not be met, the sponsor agreed to set up a reserve fund that could be used to hire outside help if the project fell behind schedule. This contingency plan included a monthly progress review and a provision that falling three or more weeks behind schedule would trigger release of the reserve funds. In addition, two managers were charged with identifying no less than three vendors who could help with the project.

A good contingency plan prepares your project and company to deal quickly and effectively with adverse situations. When disaster strikes, managers and project members with a plan can act immediately; they don't have to spend weeks trying to figure out what they should do or how they will find the funds to deal with their new situation.

Deal with unanticipated risks

The above process works well when risks can be anticipated. But what about risks that *cannot* be anticipated?

For example, consider a new technology that emerges without warning and enables a rival company to come out with a product that makes yours obsolete. The traditional tools of project management—high-level estimates, budgets and schedules, control systems, etc.—couldn't have helped you anticipate this event.

When uncertainty is high, you need something more than conventional risk management—you need adaptive project management. Adaptive management approaches project activities as smaller, iterative learning experiences. The information gathered from these incremental activities is then used and applied towards subsequent tasks. Some companies refer to this approach as "rapid iterative prototyping."

Consider the way in which venture capitalists work with entrepreneurs. They seldom give entrepreneurs a large sum of money at the beginning of a project. Instead, venture capitalists stage their commitment as their entrepreneurial partners produce results. If the entrepreneur has a plan to develop a breakthrough software application, the venture capitalist will provide only enough money for the project to move forward to the next level. If the entrepreneur succeeds in reaching that level, the venture capitalist will review progress and develop expectations for the next step. Each investment gives the venture capitalist opportunities to probe for more information, learn, and reduce uncertainty.

An adaptive project management model encourages you to:

1. **Perform experiments iteratively and quickly.** Team members engage in small, quick incremental experiments with the project work. They evaluate the outcomes of those experiments and make adjustments moving forward. The quick turnaround time helps them learn fast and apply their new knowledge promptly to the remaining project work. Many companies refer to this as "rapid iterative prototyping."
2. **Have fast cycles.** Long lead times interfere with the iterative approach.
3. **Emphasize early delivery of value.** Instead of delivering value at project end, your team provides deliverables earlier and in smaller pieces. This encourages feedback and enables team members to incorporate learning into subsequent activities.
4. **Staff the project with people who have a talent for learning and adapting.** Some people are faster learners and more amenable to change than others.
5. **Avoid over-relying on decision-making tools that assume predictability.** Decision-making tools such as return on investment, net present value, and internal rate of return are useful when future cash flows are reasonably predictable. However, when a project has a high degree of uncertainty associated with it and future cash flows can't be predicated, these decision-making tools are less valuable.

Adaptive project management may not be necessary for every project. But you do need to use it when uncertainty during the planning and execution phases is high—that is, when you can't anticipate all the risks or when your project may have a wide range of potential outcomes.

The importance of wrapping up

Closing down your project is the fourth and final phase of project management. During this phase, your team delivers or reports its results to the project sponsor and stakeholders and then examines its own performance. Closing down the project is important because it gives everyone a chance to reflect on what they've accomplished, what went right, what went wrong, and how the outcome might have been improved. Such reflections form the core of organizational learning—which should be leveraged in other projects sponsored by your organization.

Activities within the closedown phase include:

- Performance evaluation
- Documentation
- Lessons learned
- Celebration

Performance evaluation

With performance evaluation, you determine how well the project performed relative to quality, schedule, and cost, as well as any subsequent amendments:

- **Objectives or deliverables:** Have all objectives been met? Have project deliverables met the mandated specifications? For example, if the project charter required the delivery of a complete plan for entering a new market—including data on market size, a listing of competing products and prices, and so forth—the plan submitted by the project should be evaluated against each of those details.
- **Schedule:** Was the project completed on time? If not, the project team should do two things: (1) estimate the cost of the project's tardiness to the company, and (2) determine the cause of the delay and identify how it could have been prevented.
- **Cost:** What did completion of the project cost? Was total cost within budget constraints? If the project ran over budget, the team should determine the cause of the overspending and identify how that variance might have been avoided.

Ideally, an independent party capable of making an objective assessment should conduct the post-project evaluation.

Documentation

Every large project produces reams of documents, such as meeting minutes, budget data, the closedown performance evaluation, and so forth. It's vital to collect and store these documents to encourage learning. Consider this example:

> Two years ago, a market-strategy project team was credited with the successful launch of a new breakfast cereal, CornCrunchies. The team's deliverable was a complete market analysis and plan for introducing a new cereal.
>
> Helen, a product manager at the same company, has been given the job of organizing and leading an analogous project—this one aimed at introducing KiddieKrunchies, another breakfast food under development. To learn from the CornCrunchies experience, Helen and core members of her project team spend several days poring through the stored documents of that earlier project. They pick out useful reporting templates, research reports, and Gantt charts. They also interview the CornCrunchies project manager and several key participants.
>
> Then one of Helen's coworkers, Stephen, makes an important discovery. "A report I found in the file cites a meeting between our marketing people and Fieldfresh, a major U.K. grocery distributor. According to this report, Fieldfresh had proposed being the exclusive U.K. distributor for CornCrunchies, but we went with Manchester Foods instead."
>
> "And we all know what a poor job Manchester has done," Helen chimes in. "Make a copy of that report. We'll want to have Fieldfresh on our list of possible distributors."

In this case, Helen's team found several useful pieces of information in the previous project's documentation: a proven approach to organizing work around marketing analysis and planning; reporting forms; and a potential overseas distributor.

Your project may likewise be a mine of useful information for subsequent project teams—but only if you gather all important documents and store them in accessible formats.

Key Idea: Lessons learned

Key Idea

As your project winds up, all participants should convene to identify what went right and what went wrong. They should list their successes, mistakes, corrected assumptions, and processes that could have been handled better. That list will become part of the project's documented record.

Here is a partial list of questions that participants need to address during a lessons learned session:

- In retrospect, how sound were our assumptions?
- How well did we test our key assumptions?
- How well did we seek out alternatives to our business problem?
- Did we under- or overestimate time estimates for tasks?
- Were our meetings productive?
- If we could start over again tomorrow, what would we do differently?

Make a systematic list of these lessons, grouped by topic (for example, planning, budgeting, execution, and so forth). Ensure that the document is available to all subsequent project teams. Next to the project deliverables, these lessons may be the most valuable output of your team's effort.

Every project can teach us something about how to handle the next one. How can you capture lessons learned?

Celebration

To mark the formal end of a project, hold a celebration to acknowledge the team's success. Invite all project team members and the project sponsor. Consider inviting customers, suppliers, and non-project employees who nevertheless contributed to the group's results. Reflect on what the team accomplished and how the project has benefited the company. If the project failed to deliver on its entire list of objectives, highlight the effort that people made and the goals they did achieve.

Finally, use the occasion to thank all who helped and participated. Once that's done, pop the corks and celebrate the end of your project!

Overview

This section provides interactive exercises so you can practice what you've learned. These exercises are self-checks only; your answers will not be used to evaluate your performance in the topic.

Scenario

Assume the role of a manager in a fictional situation and explore different outcomes based on your choices (5-10 minutes).

Check Your Knowledge

Assess your understanding of key points by completing a 10-question quiz (10 minutes).

Scenario: Part 1

Part 1

Rebecca is the information services manager at Primus, Inc., which publishes several newsletters about exercise and other health-related topics. Primus has recently decided to expand into book publishing and conferences. The company knows it will need a new database to manage conference registrations and one-time book purchases in addition to the usual newsletter subscriptions.

Rebecca's boss, Evelyn, has assigned Rebecca the task of designing the new database. Evelyn reminds her, "All your stakeholders—me, the CEO, the fulfillment manager, and others—are going to need regular updates on your progress. And we need you to get moving on this as quickly as possible."

Rebecca begins defining and organizing the project. She sets measurable, realistic objectives for the project. And she determines what the various stakeholders will want from the new database. She also defines stakeholders' roles and responsibilities and creates a project charter. But these are just a few aspects of the first phase of project management.

What else should Rebecca do during the defining and organizing phase?

- Assemble a team of individuals who have the skills needed for successful implementation of the project

  Not the best choice.

  Assembling a team is actually part of the second phase of project management—planning the project. Though there may be some overlap between these phases, Rebecca should hold off assembling her team until she has more fully defined the project's parameters and objectives.

- Develop a detailed schedule showing the tasks required by the project and the estimated timetable for each task

  Not the best choice.

Developing a detailed schedule is part of the planning phase of a project life cycle, the phase that follows defining and organizing the project. While Rebecca might develop a rough budget and timetable in the defining and organizing phase, she should save the *detailed* figures and schedules for the planning phase. At that point, she will have more fully defined the project's parameters and objectives.

- Decide how to make trade-offs among the time, costs, and quality associated with the database project

  Correct choice.

  Time, cost, and quality strongly determine what is possible to achieve on a project. Usually, when you change any one of these, you change your outcome as well. For each objective that you define for a project (for example, "Research off-the-shelf and custom-built databases within one month") ask yourself how the time and funds you've allocated to that objective will affect the quality of the result.

  Deciding whether and how to make tradeoffs among time, cost, and quality is a core dimension of project management. If you make a tradeoff that reduces quality, be sure to inform all the project stakeholders and make sure they support the change. Otherwise, you're setting yourself up for failure, and the project's final outcome will almost certainly disappoint at least some stakeholders.

Scenario: Part 2

Part 2

After completing the defining and organizing phase of project management, Rebecca turns to the planning phase. She develops a budget and assembles her team. Based on her assessment of the skills required by the project, she selects several employees from her department, as well as two database consultants who have worked with her group before.

Then she considers various scheduling methods. She's familiar with Gantt and PERT charts, as well as various project-planning software packages—but she's uncertain which would be the most appropriate tool for this particular project.

When she mentions her uncertainty to Herman, her friend in finance, he says, "Well, what's going to be more important to you during the project—saving time and showing stakeholders how things are progressing, or providing detailed information on which tasks must be completed before another one can start?"

Based on Rebecca's priorities, which scheduling method would you advise her to select?

- Use Gantt charts that represent what the project activities are, where they overlap, and how much time is allocated for each

  Correct choice.

  Since Rebecca is familiar with her team and her boss has stressed the importance of regular stakeholder updates, Rebecca should opt for Gantt charts. These charts are simple to construct and appreciated for their ability to depict the "big picture" of a project at a glance. Thus they save time while also enabling stakeholders and end-users to quickly and easily see how a project is progressing.

- Employ PERT charts that show the important task dependencies of the project

  Not the best choice.

  Since Rebecca and her team members know one another and her supervisor has emphasized the need for regular updates for all stakeholders, it would be better for Rebecca to use Gantt bar charts.

  Both PERT and Gantt charts have their pros and cons. PERT charts allow for detailed knowledge of all project parts and their interdependencies, but are quite complex and take time to master. Gantt charts are easy to build and read, but they don't reveal as much about how a change in one area of the project affects other areas.

- Purchase the most up-to-date version of a well-regarded project-planning software package that handles both Gantt and PERT charts as well as budgets

  Not the best choice.

  Since Rebecca's project is time sensitive, she shouldn't adopt an unfamiliar software package at this point. The training and technical support that she may need in order to begin using the new software might create delays in her overall project schedule. Too often, managers get lured into using a scheduling tool because "everyone else is using it" or because "it's cutting edge." To select a scheduling method or tool, take a hard look at how you like to work and what your project priorities are. Then select the method or tool that best fits your habits and needs.

Scenario: Part 3

Part 3

Rebecca decides to use Gantt charts to schedule her project. Once the scheduling is complete, she moves to the project execution phase. Her team begins carrying out all the activities necessary to achieve the project's objectives, including researching various database designs, selecting the one that suits their needs, and building the final database.

Rebecca also establishes a system for monitoring and controlling the project. As part of her system, she tries to stay focused on what's important by continually asking herself questions such as, "Which parts of the project are the most essential to track and control?" and "What are our top objectives in launching the project?" Next, she prepares to put several other controls in place as well.

What other kinds of project controls might Rebecca establish?

- Weekly progress-and-problem updates from each team member

  Good choice.

  Regular updates from team members are valuable because they enable you to respond in a timely manner to the concerns or problems that inevitably arise during projects. The best-case scenario is to receive information on a real-time basis—that is, immediately as concerns and problems arise. In most cases, weekly updates will achieve this. They're frequent enough to allow a quick response, and they're structured enough to enable you to deal with issues systematically.

- A corrective-action plan in response to problems that arise during the project

  Good choice.

  All project-control systems should contain plans for how you'll respond to problems that arise as the project unfolds. Without a response plan, your control system enables you only to monitor what's going on—but not control it. However, in seeking to exercise control over the project, take care not to go too far in the other direction and micromanage team members who are capable of handling their roles in the project and its associated problems themselves.

- A communication plan that enables stakeholders to be updated on the project's status

  Not the best choice.

  Though it's essential to communicate progress regularly to all project stakeholders, this type of communication plan is not an example of a project control used during the execution phase. Rather, project-control systems focus on three things: (1)

continually clarifying the project's objectives, (2) building corrective action into the system, and (3) responding in a timely manner to problems.

Scenario: Conclusion

Conclusion

With her project-control system in place, Rebecca's team forges ahead on the work, addressing problems as they arise. As the team completes its work, Rebecca moves to the final phase in the project life cycle: closing down the project. This phase entails evaluating the project team's performance, archiving important documents related to the project, capturing lessons learned, and celebrating the project's completion.

Project management isn't easy. By planning carefully, selecting the best scheduling method for your project's needs and your own work habits, and establishing an effective project-control system, you can boost your chances of steering a project toward success.

Activity: Check Your Knowledge: Question 1

You've been assigned a project that seems to have explicit, set expectations and clearly outlined responsibilities. Before you begin developing a plan for implementing the project, what should you do first?

- Ensure that funding for the project has been approved

  Not the best choice.

  Although it's good to ensure that a project is funded, you should first determine whether the project will meet an important business need. If it doesn't, carrying out the project would waste time and money.

- Confirm that the project would solve an important business problem

  Correct choice.

  It is a good idea to confirm that the project would indeed meet an important need in your group or organization. While expectations may be clear, the project may not necessarily address a real business need. If it doesn't, carrying out the project would waste time and money.

- Learn who the project's stakeholders are and what they hope the project will achieve

  Not the best choice.

  While identifying the project's stakeholders and their hopes is useful, you should first determine whether the project will meet an important business need. If it doesn't, carrying out the project

would waste time and money.

Check Your Knowledge: Question 2

Why should you spend time identifying all the stakeholders for your project?

- To find potential champions who will support the project

  Not the best choice.

  Though finding potential champions for your project is important, this isn't the primary reason for identifying project stakeholders. The main reason is to ensure that project objectives meet everyone's expectations of success. Stakeholders' interests vary, along with their definitions of project success. A critical task in the first phase of managing a project is to meld all stakeholders' expectations into a coherent and manageable set of project objectives.

- To ensure that the project objectives meet everyone's expectations of success

  Correct choice.

  You need to know exactly what successful implementation of the project means to the people who will be affected by the project's outcomes. One critical task in the first phase of managing a project is to meld stakeholders' expectations into a coherent and manageable set of project objectives.

- To be politically astute and identify possible obstacles early

  Not the best choice.

  Though uncovering possible obstacles is important, this isn't the primary reason for identifying project stakeholders. The main reason is to ensure that project objectives meet everyone's expectations of success. Stakeholders' interests vary, along with their definitions of project success. A critical task in the first phase of managing a project is to meld all stakeholders' expectations into a coherent and manageable set of project objectives.

Check Your Knowledge: Question 3

In the defining and organizing phase of managing a project, you need to beware of "scope creep." What does this term mean?

- Scope creep occurs when a project team unwittingly gives in to pressure to do more than what was originally planned for the project.

  Correct choice.

  As you clarify each stakeholder's definition of success, you may get caught up in trying to solve problems that lie beyond the scope of your project. Resist any temptation to expand the

project's scope without ensuring that the added objectives are critical to a majority of stakeholders.

- Scope creep occurs when project sponsors agree to extend the schedule without approving a corresponding increase in funding.

  Not the best choice.

  "Scope creep" occurs when a project team unwittingly gives in to pressure from stakeholders to expand the project's scope beyond the original plan. As you clarify each stakeholder's definition of success, you may get caught up in trying to solve problems that lie beyond the scope of your project. Resist any temptation to expand the project's scope without ensuring that the added objectives are critical to a majority of stakeholders.

Check Your Knowledge: Question 4

When you are defining project objectives, what three variables most often determine what is possible for you to consider?

- Available resources, how realistic the project is, and time limits

  Not the best choice.

  Though these three things affect a project, it is time, cost, and quality that most often determine your project objectives. Change any one of these, and you change your project's outcome.

- Complexity, time, and resources

  Not the best choice.

  Though these three things affect a project, it is time, cost, and quality that most often determine your project objectives. Change any one of these, and you change your project's outcome.

- Time, cost, and quality

  Correct choice.

  Time, cost, and quality are the three variables that most often determine your project objectives. Change any one of these, and you change your project's outcome.

Check Your Knowledge: Question 5

What are you doing when you conduct a WBS analysis?

- You are subdividing the overall project into smaller tasks and then subdividing the smaller tasks until you get to the desired task size.

Correct choice.

In conducting a WBS (Work Breakdown Structure) analysis, you subdivide a complex activity into smaller tasks, continuing until the activity can no longer be subdivided. The outcomes give you a sense of your staff, budget, and time constraints.

- You are distributing the allocated funding across the project objectives to consider and anticipate personnel and activity costs.

  Not the best choice.

  A WBS (Work Breakdown Structure) analysis is not about distributing allocated funds. Instead, it's about subdividing a complex activity into smaller tasks until the activity can no longer be subdivided. The outcomes give you a sense of your staff, your budget, and the project's time constraints.

- You are assessing the risks involved in the project.

  Not the best choice.

  A WBS (Work Breakdown Structure) analysis is not about assessing risks. Instead, it's about subdividing a complex activity into smaller tasks until the activity can no longer be subdivided. The outcomes give you a sense of your staff, your budget, and the project's time constraints.

Check Your Knowledge: Question 6

You need to select a system to monitor and control the project during its execution. What essential function should your control system perform?

- The system should trigger responses to problems.

  Correct choice.

  If the control data you collect doesn't trigger a response, all you are doing is monitoring the project; you're not actually controlling it.

- The system should monitor activities in detail.

  Not the best choice.

  Your control system monitors data, not activities, and should trigger responses to problems. If the control data you collect doesn't trigger a response, all you are doing is monitoring the project; you're not actually controlling it.

- The system should track costs in the units you prefer.

  Not the best choice.

  Your control system monitors data, not costs in units you prefer, and it should trigger responses to problems. If the control data you collect doesn't trigger a response, all you are doing is monitoring the project; you're not actually controlling it.

Check Your Knowledge: Question 7

In scheduling your project, you need to track what tasks have to be done, how long they will take, and the order in which they need to be completed. Which project management tool helps you do this?

- A project charter

  Not the best choice.

  A project charter is used to spell out the nature and scope of the project work, not to schedule the work. The correct choice is a Gantt chart —a common tool that project managers use to track work. It lists project tasks in the left-hand column and indicates time blocks for each. These blocks indicate when each task should begin, based on task relationships, and when it should end.

- WBS Analysis

  Not the best choice.

  A WBS analysis is used to break down complex tasks, not to schedule the project work. The correct choice is a Gantt chart—a common tool that project managers use to track work. It lists project tasks in the left-hand column and indicates time blocks for each. These blocks indicate when each task should begin, based on task relationships, and when it should end.

- A Gantt chart

  Correct choice.

  A Gantt chart is a tool that many project managers use to schedule work. It lists project tasks in the left-hand column and indicates time blocks for each. These blocks indicate when each task should begin, based on task relationships, and when it should end.

Check Your Knowledge: Question 8

A project charter is a concise, written document that spells out the nature and scope of the project work. Which of the following items should *not* be captured in a project charter?

- A list of assumptions that are being made about the project

  Not the best choice.

  A list of assumptions about the project is important information that *should* be captured in a project charter. The ways in which the project team will accomplish its objectives, however, should *not* be detailed in the charter. A good project charter indicates the desired outcomes of the project; the means should be left to the project manager, team leader, and members to determine once the project is under way.

- The benefits that the project will have for the organization

Not the best choice.

The benefits that the project will have on an organization are important points that *should* be captured in a project charter. The ways in which the project team will accomplish its objectives, however, should *not* be detailed in the charter. A good project charter indicates the desired outcomes of the project; the means should be left to the project manager, team leader, and members to determine once the project is under way.

- The ways in which the project team will accomplish its objectives

Correct choice.

A good project charter indicates the desired outcomes of the project—but not the means by which a group will achieve those ends. The means should be left to the project manager, team leader, and members to determine once the project is under way.

Check Your Knowledge: Question 9

When developing a project budget, which of the following variables do many managers mistakenly overlook?

- Personnel

Not the best choice.

Most managers don't overlook personnel costs while developing a project budget. However, they frequently overlook ongoing maintenance costs for office space. Other overlooked variables that should be factored into a budget include training costs to bring team members up to speed, insurance costs, licensing fees, and costs for outside support such as legal or accounting counsel.

- Travel

Not the best choice.

Most managers don't overlook travel costs while developing a project budget. However, they frequently overlook ongoing maintenance costs for office space. Other overlooked variables that should be factored into a budget include training costs to bring team members up to speed, insurance costs, licensing fees, and costs for outside support such as legal or accounting counsel.

- Maintenance

Correct choice.

There may be ongoing maintenance costs for office space that you should consider while developing your project budget. Other commonly overlooked variables that should be factored into a budget include training costs to bring team members up to speed, insurance costs, licensing fees, and costs for outside support such as accounting or legal counsel.

- Research

Not the best choice.

Most managers don't overlook research-related costs while developing a project budget. However, they frequently overlook ongoing maintenance costs for office space. Other overlooked variables that should be factored into a budget include training costs to bring team members up to speed, insurance costs, licensing fees, and costs for outside support such as legal or accounting counsel.

Check Your Knowledge: Question 10

In the best of all possible worlds, who conducts the evaluation of a completed project?

- The project manager, with all stakeholders providing input

  Not the best choice.

  While the project manager and stakeholders can provide useful information for a post-project evaluation, the ideal individual to conduct the evaluation is an independent person who can objectively assess whether the team met its objectives.

- An independent person who can be objective

  Correct choice.

  Ideally, an independent person who's capable of making an objective assessment should conduct the post-project evaluation. Even when an independent auditor is not available, the evaluation must be done in a spirit of learning, not with an attitude of criticism and blame.

- The individual(s) who identified the initial problem and project

  Not the best choice.

  While individuals who identified the initial problem and project can provide useful information for a post-project evaluation, the ideal person to conduct the evaluation is an independent individual who can objectively assess whether the team met its objectives.

Check Your Knowledge: Results

Your score:

Steps for building an effective project team

1. **Recruit competent members.**
   - Identify the skills needed to fulfill the project team's goals.
   - Identify individuals who possess the required talent, knowledge, and experience.

- Recruit for any missing competencies or find ways to strengthen skills in existing team members.
- Look for members who can learn new skills quickly as needed.

2. **Define a clear, common goal.**
   - Identify the project team's goal in concise, clear language—such as "Overhaul the customer service process so that 95% of incoming calls will be handled by one service representative."
   - Explain how the goal supports the company's vision, values, and strategy.
   - Clarify the team's duration—how long it will work together to complete the project.
3. **Identify performance metrics.**
   - Select metrics that express how the team's success on the project will be measured; for example, "Eighty percent of all customer calls will be resolved in three minutes or less."
   - Set up performance metrics for interim milestones that the team can achieve as it carries out the project.
4. **Foster commitment to the goal by cultivating a supportive environment.**
   - Encourage collaborative work among team members and emphasize collective achievement.
   - Use language that accentuates communal effort, such as "We are making good progress" or "Where do we stand with respect to our project deadlines?"
5. **Create a project charter.**
   - Develop a concise written document that spells out the nature of the project that the team will complete and expectations for results.
   - Work with the team to develop the specific means by which the team will achieve the project objectives.

Steps for building a Gantt chart

1. **List phases of the project,** from first to last, down the left side of the page.
2. **Add a time scale** across the top or bottom from beginning to deadline.
3. **Draw a blank rectangle** for phase one from phase start date to estimated completion date.
4. **Draw rectangles for each remaining phase;** make sure dependent phases start on or after the date that any earlier, dependent phases finish.
5. **For independent phases, draw time-estimate rectangles** according to preferences of people doing and supervising the work.
6. **Adjust phase time estimates** as needed so that the entire project finishes on or before deadline.
7. **Add a milestone legend** as appropriate.
8. **Use graphics** to indicate which stakeholder group has responsibility for completing a particular activity.
9. **Present the chart** to stakeholders and team members for feedback.
10. **Adjust as needed.**

Steps for developing a critical path

1. **List all the activities** required to complete your project, and give a brief description of each.
2. **Determine the expected duration of each activity.**
3. **List the other activities** that must be completed before each activity's start.
4. **On a separate piece of paper, add a time scale** across the top or bottom of the page from beginning to deadline.

5. **Draw a critical path diagram,** using circles to indicate project activities and arrows to indicate task duration.
6. **Compute the earliest start times** for each activity.
7. **Compute the earliest finish times** for each activity.
8. **Identify the critical path** by locating the longest sequence of tasks through the project.
9. **Estimate the expected duration** of the entire project by adding up the durations of all the activities in the critical path.

Tips for getting your WBS right

- Start by identifying the top-priority tasks that must be completed for your project to succeed. Break those tasks into the smallest possible subtasks.
- Stop subdividing activities and tasks when they require the same amount of time as the smallest unit of time you want to schedule. For example, if you want to schedule tasks to the nearest day, break work down to tasks that take one day to perform.
- Identify the people who will have to do the work laid out in your WBS, and involve them in the process of breaking down tasks. They are in the best position to know what is involved with every job and how those jobs can be broken down into manageable pieces.
- Analyze each task. Ask yourself whether each is necessary and whether some can be redesigned to make them faster and less costly to complete.
- Check your work by looking at all the subtasks and seeing whether they add up to the highest-level tasks. Take care that you haven't overlooked any important tasks.
- Aim for three to six levels of subdivided activities—with additional levels for more complex projects. Keep in mind that only enormous projects have more than 20 levels.
- While estimating the time required for the tasks in each level of your WBS, keep in mind that these are estimates. You may well decide to change them later, as you begin refining a project schedule and budget.
- If you decide to incorporate padding in your time estimates to reduce the risk of certain tasks falling behind schedule, let other stakeholders know about the padding. Ensure that everyone knows the consequences of failing to meet deadlines.

Tips for scheduling a project

- Select the most useful tool for creating a draft schedule—such as Gantt charts, PERT charts, and critical path diagrams. You can create these with paper and pencil or with project management software; use whatever approach you're most comfortable with.
- Know which deadlines are hard and fast and which have some flexibility.
- Avoid including tasks that have a duration of more than four to six weeks on your schedule. Instead, break such tasks into smaller tasks that have shorter durations.
- Don't schedule more activities than you can personally oversee.
- Record all time segments in the same increments, such as days or weeks.
- Avoid creating a schedule that assumes overtime is needed to meet original target dates. You want to leave some flexibility for handling unexpected problems that might arise once you begin implementing the schedule.
- Look for ways to make your schedule more accurate and streamlined. For example, ask whether your time estimates are accurate. Consider whether you've left any tasks out. Anticipate potential bottlenecks.

Tips for selecting project-management software

Any project-management software should:

- Handle development of and changes to Gantt charts, PERT diagrams, and calculations of critical paths.
- Produce a schedule and budgets.
- Integrate project schedules with a calendar allowing for weekends and holidays.
- Let you create different scenarios for contingency planning and updating.
- Warn of overscheduling of individuals and groups.

Tips for putting a late project back on schedule

- Renegotiate. With stakeholders, discuss the possibility and ramifications of extending the deadline.
- Use later steps to recover lost time. Reexamine schedules and budgets to see if you can you make up the time elsewhere.
- Narrow the project scope. Are there nonessential elements of the project that can be dropped to reduce costs and save time?
- Deploy more resources. Can you put more people or machines to work on the project? If so, weigh the costs of deploying more resources against the importance of the deadline.
- Accept substitution. For example, if the project is delayed because certain parts will be arriving late, can you substitute a more readily available part?
- Seek alternative sources. Can another source supply a missing item that has caused the project to fall behind schedule?
- Accept partial delivery. Can you accept a few of a needed item to keep work going, and complete the delivery later?
- Offer incentives. Can you offer bonuses or other incentives for on-time delivery of work or parts needed to meet project deadlines?
- Demand compliance. Emphasize how crucial it is that people do what they said they would to meet project deadlines. Demanding compliance may require support from senior management.

Worksheet for identifying your project objectives

Worksheet for Identifying Your Project Objectives
Use this worksheet to uncover the issues and parameters at the core of your project.
Part I. Identify the Business Need Behind the Proposed Project
What is the perceived need or purpose behind what we are trying to accomplish with this project?
What caused people to identify a problem that needed solving through this project?
What criteria are people going to use to judge this project a success?
Part II. Identify Stakeholders' Needs
Who has a stake in the outcome of the proposed project?
Do the various stakeholders' goals for the project differ? If so, how?
Part III. Brainstorm Alternatives
List possible alternatives that you and other project team members have generated for addressing the business need you've identified. Evaluate the alternatives, and put an asterisk next to the one that will best address the business need. Next to that alternative, write down why you believe it's the best one.
1.
2.
3.
4.
5.
Part IV. Set Project Objectives
State your project's objectives. Make sure each objective is SMART—specific, measurable, action-oriented, realistic, and time-framed.
Part V. Align Objectives
Is there a relationship between your project's objectives and your organization's strategic goals? If not, revisit the objectives and consider ways to ensure that they support organizational goals.
Will your project benefit the organization? If so, how? If not, how can you redefine the objectives so that the project *will* benefit your organization?

Project charter worksheet

Project Charter Worksheet
Use this form to define the nature and scope of the project team's work as well as management's expectations for results.
Part I. Executive Summary
What are the project's objectives (deliverables)?

What are the project's objectives (deliverables)?

Part II. Business Case

What is the business need that the project will address?

What is the relationship between the project's goals and the organization's goals?

What are the benefits of the project to the organization?

Part III. Project Definition

What is the project's mission?

What is the project's scope?

What is the expected time frame for the work?

What are the project's major milestones?

What is the project's budget?

What resources are available to the project team?

What are the quality requirements for the project?

What assumptions are being made about the project?

What are the project's constraints?

Part IV. Risk Assessment

In the table below, outline the risks associated with the project, their probability of occurrence, and their potential impact.

Risk	Probability	Potential Impact	Steps to Manage Risk

Part V. Project Organization

In the table below, outline roles and responsibilities of project team members.

Team Member Name	Role	Responsibility

Worksheet for developing high-level estimates

Worksheet for Developing High-Level Estimates

Use this worksheet to divide a complex activity into smaller tasks—a process known as Work Breakdown Structure (WBS). Once tasks have been broken down into smaller, more manageable units, estimate the time, costs, and skills needed to complete each task. These high-level estimates will inform your project plan. Use multiple pages as needed.

Description of the overall project:

What is the smallest unit of time that you want to schedule? *For example, if you want to schedule to the nearest day, you will need to break down work to the point where tasks take a day to perform.*

Major Task	Level 1 Subtasks	Level 2 Subtasks	Level 2 Subtask Duration (hours/days/weeks)	Level 2 Subtask Costs	Level 2 Subtask Skills Needed
		Total			

Worksheet for assessing project team members' skills

Worksheet for Assessing Project Team Members' Skills

Use this worksheet to take stock of the skills that potential project team members might bring to the table.

Part I. Identify Needed Skills

1. State your project's objective.

2. What are the desired results of the project?

3. What activities will produce the results you want?

4. What skills do those activities require?

Part II. Identify People with Required Skills

1. Survey your organization. Which individuals have the needed skills you've identified in Part I? List them in the table below.

Potential Team Member	Skills that He/She Possesses	Activity Requiring Skill

2. Review the table you completed above. Have you listed at least one person to represent each of the following skills?

- *Technical*: expertise in specific areas
- *Problem-solving*: ability to analyze different situations and craft solutions that others may not see
- *Interpersonal*: capacity to work effectively with others
- *Organizational*: understanding of the company's political and logistical landscape and ability to form networks of contacts throughout the organization
- *Developmental*: ability to master new skills as needed
- *Communication*: capacity to effectively and efficiently exchange information and listen to others

3. If any of the above skills is missing in the list of proposed team members, how will you fill the gap?

Meeting minutes form

Meeting Minutes Form

Use this form to document decisions made during project team meetings and to record who is accountable for carrying out decisions and when and how they're going to carry them out.

Project Name:

Date and Time:

Location:

Attendees:

Purpose:

Objectives:

What	How	Who	By (date)

Worksheet for monitoring project progress

Worksheet for Monitoring Project Progress

Use this form to help assess progress on your project, present this information to others, and determine next steps.

Project:	**Prepared by:**
For the period from:	**to:**

Current Status

Key milestones for this period:

Achieved (list)	Coming up next (list)

Key issues or problems:

Resolved (list)	Need to be resolved (list)

Key decisions:

Made (list)	Need to be made (list)	By whom	When

Budget status:

Implications of Current Status

Does the project status require changes in objectives, timeline/delivery dates, project scope, or resource allocation (including people and financial)? If so, list them below.

Next Steps

List the specific action steps that will be done to help move this project forward successfully. Put a name and date next to each step if possible.

Step	Person Responsible	Date

Form for capturing lessons learned

Form for Capturing Lessons Learned

Use this form to summarize the "lessons learned" from a completed project. Identify lessons learned by asking all project participants to meet and discuss.

Project name: **Date:**

Prepared by:

Meeting participants:

For each major phase of the project (or key task), identify what worked (what you did well), what didn't work, and ways the team could improve the process the next time.

Project Phase/Task	What Worked	What Didn't Work	Ways to Improve

Targets analysis: How effectively did the project/team …

Achieve goals and meet project objectives?

Meet deadlines?

Monitor and stay within budget?

Communicate about the project?

Resources assessment: Were the resources allocated to the project (time, money, personnel) appropriate, sufficient, and efficiently used? *Explain your responses.*

Lessons learned: What are the key lessons learned that can be applied to future projects?

Why Develop Others?

"At the end of the day, you bet on people, not strategies."
Larry Bossidy
Former CEO, AlliedSignal

In today's global business environment, markets and regulations change quickly. Competitors constantly innovate. Technological changes are the norm.

In order to outmaneuver the competition and meet the demands of the moment, organizations must be agile. They must execute flawlessly. And they must transform themselves continuously.

Are your leaders ready?

Dr. Noel M. Tichy
Professor
University of Michigan Ross School of Business

We have now entered an era where I don't care what industry you're in, you need leaders who

can make decisions, make judgment calls at every single level. All the way down to the interface with the customer.

If you go to a company like Google or any of the high tech companies, a lot of the innovation that Amazon does is happening right at the front line. Go ahead, try it, put it out there, we'll learn from it. That cannot happen if the senior leadership doesn't have a commitment to both develop the leadership capability, but develop the business through engaging people at all levels of the organization.

Becoming a teaching organization

I like to tell parents that they cannot delegate their responsibility to develop their children. And I think it is the same in an organization. Day in and day out the person that has the biggest impact on people in the organization is the next level above and the associates around and below. And so to build a learning organization I say is not enough. Learning could be, you know we are learning cooking, we are learning this or that, but teaching organizations, when I learned something, I have a responsibility to teach my colleagues.

So everybody takes responsibility for generating new knowledge and it is not enough to be a learner, you then have to translate it into teaching.

The Virtuous Teaching Cycle
The role of a leader is to ensure that the people who work for them and around them are better every day. There's only one way to make people better. It's to teach them, learn from them, create what I call "virtuous teaching cycles", not command and control.

A virtuous teaching cycle is teach learn, teach learn. And the leader has a responsibility for reducing the hierarchy, for having a point of view to start the discussion, but then to be responsible to hear everyone's voice, get everyone involved in a disciplined way. It is not a free for all. But it is the leader's responsibility to create that virtuous teaching cycle.

A wonderful example of virtuous teaching cycle is the program that Roger Enrico ran at Pepsi, where every one of the 10 vice presidents comes with a business project.

Roger Enrico gets smarter as result of five days with 10 vice presidents, because he's learning from them. He needs to lower the hierarchy. He needs to be open to learning. And in turn, the people participating need to be energized and empowered to come up and engage in problem solving.

Another example is at Best Buy, where every morning in the stores you would bring 20 associates or so together and they would review the profit and loss statement from the day before, what we learned from the different customer segments in our stores, what we can do to improve our performance this day. And they do that every single day. The store manager was learning mostly from the associates on the floor.

That was a virtuous teaching cycle were everybody is teaching everybody, everybody is learning and the result has been an incredible result at Best Buy.

"The growth and development of people is the highest calling of leadership."
- Harvey S. Firestone
Founder, Firestone Tire and Rubber Co

There are clear advantages to leader-led development.

But for many leaders, taking on teaching, coaching, and other development responsibilities can seem daunting. You might avoid taking on these roles due to lack of time, resources, or your own lack of comfort with this role.

The following tips and resources can help you impart valuable learning to your team every day.

To develop others...
- Start with a Teachable Point of View

The first requirement of being able to develop other leaders is to have what I call a teachable point of view. I often give the example of, if I ran a tennis camp and you just came to day one of the tennis camp, I better have a teachable point of view on how I teach tennis. So you are standing there looking at me and it has got four elements. One, the ideas, well how do I teach the backhand, the forehand, the serve, rules of tennis. Then if I am a good tennis coach, I have a set of values. What are the right behaviors I want, how do I want you to dress, how do I want you to behave on the tennis court.

But if that's all I have, what do I do? Show you a power point presentation and then expect you to hit 500 backhands, 500 serves, run around for eight hours. I have to have a teachable point of view on emotional energy. How do I motivate you to buy in to the ideas and values?

On one end of the spectrum it could be I threaten you with corporal punishment, the other I can give you stock options, I can make you feel good about yourself, I can help you develop as a human being, what motivates you.

And then finally, how do I make the tough judgment calls, the yes/no, decisions as the tennis coach, the ball is in, the ball is out. I don't hire consultants and set up a committee, it is yes/no. And the same with running a business, what are the products, services, distribution channels, customer segments that are going to grow top line growth and profitability of the organization.

What are the values that I want everyone in the organization to have, how do I emotionally energize thousands of people, and then how do I make the yes/no, judgments on people and on business issues. So the fundamental building block of being able to develop other leaders is to have that teachable point of view just like the tennis coach.

To develop others...
- Lead with questions

Questions are hugely important because you want to create dialogue and again, what I call a virtuous teaching cycle where the teacher learns from the students and vice versa. Which means everybody ought to be free to ask whatever is on their mind, whatever it will take to get clarity and understanding, but it is not the leader just coming in and freeform asking questions. I believe the leader has a responsibility for framing the discussion, for having as best they can a teachable point of view, they may need help from their people in flushing it out, but they need to set the stage but then it has to be a very interactive, what I call virtuous teaching cycle environment, teach learn, teach learn, teach learn.

To develop others...
- Make it part of your routine

A good example to me of an outstanding leader developing other leaders is Myrtle Potter who at the time I am commenting was Chief Operating Officer of Genentech running the commercial side of the business. And she would take time at the end of every single meeting and do some coaching of the whole team on how we could perform as a team better, and then she would

often take individuals and say, could we spend 10 minutes over a cup of coffee, I want to give you some feedback and coaching on that report that you just presented on or how you are handling a particularly difficult human resource issue, but it was part of her regular routine. And I think the challenge for all of us as leaders is to make that a way of life and it is built into the fabric of how we lead and it is not a one off event, three times a year. It is happening almost every day.

To develop others...
- Make it a priority

One of the biggest challenges in getting people kind of on this path is to overcome some of their own resistance, either fear or the way I view the world I don't have time for this, everybody can make time. Roger Enrico is CEO of Pepsi. He didn't have time to go off for a week at a time and run training sessions. He had to readjust his calendar. So it requires you to look in the mirror and say, is this important. If it is important, of course I can make the time. Then I have to get over my own anxiety on how well I can do it, but it is a commitment to get on the path that says: this is how I am going to drive my own performance and the performance of my colleagues.

To develop others...
- Learn to teach

I think the biggest mistake is to assume you are going to be good at it right off the bat. It is like learning anything else. First time you go out and try and play tennis, good luck. But you got to stay with it and you got to engage your people in helping make you better and them better. And so it is a journey you need to get on, not I am going to do it perfectly when I start out.

If you want to be a great leader who is a great teacher, it's very simple. You have got to dive into the deep end of the pool. But you've got to dive into the pool with preparation. I don't want you drowning. I want you succeeding. It is extraordinarily rewarding for most human beings to teach others. I think once you can turn that switch on, it is self perpetuating. You get a lot of reinforcement, your team is better. You perform better because your performance goes up and it becomes this virtuous teaching cycle.

Your opportunity to develop others

We've heard why developing others can drive greater business results, and how to make the most of your leader-led development efforts. The materials provided in Develop Others enable you to create personalized learning experiences for YOUR team within the flow of their daily activities. Use the guides and projects to engage your team quickly. And to explore how key concepts apply to them in the context of their priorities and goals.

The value of teaching is the performance of the organization is totally dependent on making your people smarter and more aligned every day as the world changes. In the 21st century we are not going to get by with command and control. We are going to have to get by with knowledge creation. The way you create knowledge in an organization is you create these virtuous teaching cycles where you are teaching and learning simultaneously, responding to customer demands and changes, responding to changes in the global environment. My bottom line is if you're not teaching, you're not leading.

A leader's most important role in any organization is making good judgments — well informed, wise decisions about people, strategy and crises that produce the desired outcomes. When a leader shows consistently good judgment, little else matters. When he or she shows poor judgment nothing else matters. In addition to making their own good judgment calls, good leaders develop good judgment among their team members.

Dr. Noel M. Tichy
Professor, University of Michigan Ross School of Business

Dr. Noel M. Tichy is Professor of Management and Organizations, and Director of the Global Business Partnership at the University of Michigan Ross School of Business. The Global Business Partnership links companies and students around the world to develop and engage business leaders to incorporate global citizenship activities, both environmental projects and human capital development, for those at the bottom of the pyramid. Previously, Noel was head of General Electric's Leadership Center at Crotonville, where he led the transformation to action learning at GE. Between 1985 and 1987, he was Manager of Management Education for GE where he directed its worldwide development efforts at Crotonville. He currently consults widely in both the private and public sectors. He is a senior partner in Action Learning Associates. Noel is author of numerous books and articles, including:

For more information about Noel Tichy, visit http://www.noeltichy.com.

Share an Idea

Leaders are in a unique position to recognize the ideas and tools that are most relevant and useful for their teams. If you only have a few minutes, consider sharing an idea or tool from this topic with your team or peers that is relevant and timely to their situation.

For example, consider sending one of the three recommended ideas or tools below to your team with your comments or questions on how the idea or tool can be of value to your organization. By simply sharing the item, you can easily engage others in important conversations and activities relevant to your goals and priorities.

Project charter worksheet
Define project objectives
Steps for building an effective project team

To share an idea, tip, step, or tool with your comments via e-mail, select the EMAIL link in the upper right corner of the page that contains the idea, tip, step, or tool that you wish to share.

Discussion 1: Capturing lessons from past projects

At any one time, members of your team are managing projects of all sorts. With every project they handle, they learn important lessons that they can then apply to subsequent projects. By capturing these lessons, they can continually improve the way they manage projects. And that increases the odds that their projects will deliver the promised value for your unit and organization.

To capture lessons from past projects, your team members need to learn how to evaluate not only a project's performance in terms of quality, schedule, and cost requirements, but also their own performance on key project-management processes — such as conducting meetings and testing key assumptions.

Use these resources to lead a discussion with your team about these aspects of learning from past projects.

Download resources:

Discussion Invitation: Capturing Lessons from Past Projects
Discussion Guide: Capturing Lessons from Past Projects
Discussion Slides: Capturing Lessons from Past Projects (optional)
Tips for Preparing for and Leading the Discussion

Working through the discussion guide can take up to 45 minutes. If you prefer a shorter 15- or 30-minute session, you may want to focus only on those concepts and activities most relevant to your situation.

Discussion 2: Balancing a project's competing demands

With every project your team members manage, they will likely have to decide whether and how to make trade-offs between three key measures of project performance: (1) quality, or how well the project achieves its stated objectives and produces the desired deliverables; (2) time — that is, whether the project can be completed by the desired date; and (3) cost, or whether the project will come in within budget.

Whenever a project team changes one of these measures of project performance, the remaining two measures may have to change. For instance, if key project stakeholders insist that the project team accelerate the schedule, the team may have to sacrifice quality or spend more money to speed up the work.

By learning how to balance these competing demands, your team members can make smart decisions, understand the consequences of changes they decide to make, and communicate the consequences of those changes clearly to project stakeholders.

Use these resources to lead a discussion with your team about balancing their projects' competing demands.

Download resources:

Discussion Invitation: Balancing a Project's Competing Demands
Discussion Guide: Balancing a Project's Competing Demands
Discussion Slides: Balancing a Project's Competing Demands (optional)
Tips for Preparing for and Leading the Discussion

Working through the discussion guide can take up to 45 minutes. If you prefer a shorter 15- or 30-minute session, you may want to focus only on those concepts and activities most relevant to your situation.

Start a Group Project

Just like any change effort, successfully incorporating new skills and behaviors into one's daily activities and habits takes time and effort. After reviewing or discussing the concepts in this topic, your direct reports will still need your support to fully apply new concepts and skills. They will need to overcome a variety of barriers including a lack of time, lack of confidence, and a fear of making mistakes. They will also need opportunities to hone their skills and break old habits. To help ensure

their success, you can provide safe opportunities for individuals and your team as a whole to practice and experiment with new skills and behaviors on the job.

For example, to encourage the adoption of new norms, you can provide your team members with coaching, feedback, and additional time to complete tasks that require the use of new skills. Management approaches such as these will encourage team members to experiment with new skills until they become proficient.

Group learning projects provide another valuable technique for accelerating team members' development of new behaviors. A group learning project is an on-the-job activity aimed at providing team members with direct experience implementing their new knowledge and skills. Through a learning project, team members discover how new concepts work in the context of their situation, while simultaneously having a direct and tangible impact on the organization.

The documents below provide steps, tips, and a template for initiating a group learning project with your team, along with two project recommendations for this topic.

Download resources:

Tips for Initiating and Supporting a Learning Project
Learning Project Plan Template
Learning Project: Manage a Project's Risks
Learning Project: Define a Project's Critical Path

Performing a Project Premortem

Gary Klein. "Performing a Project Premortem." *Harvard Business Review*, September 2007.

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Summary

In a premortem, team members assume that the project they are planning has just failed—as so many do—and then generate plausible reasons for its demise. Those with reservations may speak freely at the outset, so that the project can be improved rather than autopsied.

Will Project Creep Cost You—or Create Value

Loren Gary. "Will Project Creep Cost You—or Create Value." *Harvard Management Update*, January 2005.

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Summary

It's a question that can be the bane of a manager's existence: When do you permit changes to a major project? Allow the wrong changes and the project you're responsible for can veer off course, run over budget, and miss key deadlines. Ignore the right change and you fail to capitalize on a major market opportunity. Hence, the dilemma: How do you stay open to making midstream changes that promise to

improve your project's outcome without succumbing to the dangers of the phenomenon of "creep," in which small-scope changes add up to create irremediable budget- or schedule-busting effects? Learn how to create a system flexible enough to recognize value.

They Bought In. Now They Want to Bail Out.

Eric McNulty. "They Bought In. Now They Want to Bail Out." *Harvard Business Review*, December 2003.

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Summary

Chief Technology Officer Barry Golding is meeting with Mathews & Co.'s department heads to ask for another round of investment so he can begin implementing customer relationship management software at the menswear chain. For months, he has been the CRM project's cheerleader, and it is Barry whose reputation is at stake. He quickly loses control of the meeting. One department head is disappointed that so few of her wish list items are in Barry's latest plan. Another is sour on the project now that he's discovered he won't get any payback for two years. The CEO, who has given the project his blessing, isn't present to back up Barry. Barry can't see what he could have done to keep the department heads on his side. But a friend later tells him about what she calls the "blue sky paradox:" You have to get people to dream big to sell a project, but by doing that you set them up to be disappointed. What can Barry do to save the project?

Commenting on this fictional case study are Nathaniel Leonard, the supply chain director of Goodyear's Engineered Products business; Andrew McAfee, an assistant professor at Harvard Business School; Barry J. Gilway, the executive vice-president of Zurich North America Services; and John Freeland, the managing partner of Accenture's CRM practice.